

# OFFICIAL REPORT OF PROCEEDINGS

Wednesday, 16 July 1986

The Council met at half-past Two o'clock

## PRESENT

HIS EXCELLENCY THE ACTING GOVERNOR (*PRESIDENT*)  
(THE HONOURABLE THE CHIEF SECRETARY)

SIR DAVID AKERS-JONES, K.B.E., C.M.G., J.P.

THE HONOURABLE THE FINANCIAL SECRETARY

MR. PIERS JACOBS, O.B.E., J.P.

THE HONOURABLE THE ATTORNEY GENERAL

MR. MICHAEL DAVID THOMAS, C.M.G., Q.C.

THE HONOURABLE CHEN SHOU-LUM, C.B.E., J.P.

THE HONOURABLE PETER C. WONG, C.B.E., J.P.

THE HONOURABLE ALLEN LEE PENG-FEI, O.B.E., J.P.

THE HONOURABLE HU FA-KUANG, O.B.E., J.P.

THE HONOURABLE WONG PO-YAN, O.B.E., J.P.

THE HONOURABLE DONALD LIAO POON-HUAI, C.B.E., J.P.

SECRETARY FOR DISTRICT ADMINISTRATION

THE HONOURABLE CHAN KAM-CHUEN, O.B.E., J.P.

THE HONOURABLE MARIA TAM WAI-CHU, O.B.E., J.P.

DR. THE HONOURABLE HENRIETTA IP MAN-HING, O.B.E., J.P.

THE HONOURABLE CHAN NAI-KEONG, C.B.E., J.P.

SECRETARY FOR LANDS AND WORKS

THE HONOURABLE MRS. RITA FAN HSU LAI-TAI, J.P.

THE HONOURABLE MRS. PAULINE NG CHOW MAY-LIN, J.P.

THE HONOURABLE PETER POON WING-CHEUNG, M.B.E., J.P.

THE HONOURABLE YEUNG PO-KWAN, C.P.M., J.P.

THE HONOURABLE KIM CHAM YAU-SUM, J.P.

THE HONOURABLE JACKIE CHAN CHAI-KEUNG

THE HONOURABLE CHENG HON-KWAN

THE HONOURABLE HILTON CHEONG-LEEN, C.B.E., J.P.

DR. THE HONOURABLE CHIU HIN-KWONG

THE HONOURABLE CHUNG PUI-LAM

THE HONOURABLE HO SAI-CHU, M.B.E., J.P.

THE HONOURABLE HUI YIN-FAT

THE HONOURABLE RICHARD LAI SUNG-LUNG

DR. THE HONOURABLE CONRAD LAM KUI-SHING

THE HONOURABLE MARTIN LEE CHU-MING, Q.C., J.P.

THE HONOURABLE LEE YU-TAI

THE HONOURABLE DAVID LI KWOK-PO, J.P.

THE HONOURABLE LIU LIT-FOR, J.P.

THE HONOURABLE NGAI SHIU-KIT, O.B.E., J.P.

THE HONOURABLE PANG CHUN-HOI, M.B.E.

THE HONOURABLE POON CHI-FAI

PROF. THE HONOURABLE POON CHUNG-KWONG

THE HONOURABLE HELMUT SOHMEN

THE HONOURABLE SZETO WAH

THE HONOURABLE TAI CHIN-WAH

THE HONOURABLE MRS. ROSANNA TAM WONG YICK-MING

THE HONOURABLE TAM YIU-CHUNG

DR. THE HONOURABLE DANIEL TSE, O.B.E., J.P.

THE HONOURABLE ANDREW WONG WANG-FAT

THE HONOURABLE JOHN RAWLING TODD, C.V.O., O.B.E., J.P.  
SECRETARY FOR HOUSING

THE HONOURABLE LAU WONG-FAT, M.B.E., J.P.

THE HONOURABLE HARNAM SINGH GREWAL, E.D., J.P.  
SECRETARY FOR TRANSPORT

THE HONOURABLE NIGEL CHRISTOPHER LESLIE SHIPMAN, J.P.  
SECRETARY FOR HEALTH AND WELFARE (*Acting*)

THE HONOURABLE STEUART ALFRED WEBB-JOHNSON, J.P.  
SECRETARY FOR TRADE AND INDUSTRY (*Acting*)

THE HONOURABLE MICHAEL LEUNG MAN-KIN, J.P.  
SECRETARY FOR EDUCATION AND MANPOWER (*Acting*)

#### **ABSENT**

THE HONOURABLE LYDIA DUNN, C.B.E., J.P.

DR. THE HONOURABLE HO KAM-FAI, O.B.E., J.P.

THE HONOURABLE JOHN JOSEPH SWAINE, O.B.E., Q.C., J.P.

THE HONOURABLE STEPHEN CHEONG KAM-CHUEN, O.B.E., J.P.

THE HONOURABLE CHEUNG YAN-LUNG, O.B.E., J.P.

THE HONOURABLE MRS. SELINA CHOW LIANG SHUK-YEE, O.B.E., J.P.

THE HONOURABLE CHAN YING-LUN, J.P.

THE HONOURABLE THOMAS CLYDESDALE

#### **IN ATTENDANCE**

THE CLERK TO THE LEGISLATIVE COUNCIL

MR. LAW KAM-SANG

**Papers**

The following papers were laid on the table pursuant to Standing Order 14(2):

*Subject* *L.N. No.*

## Subsidiary Legislation:

## Road Traffic Ordinance

Taxis (Limitation on Number) Notice 1986..... 155

## Telecommunication (Exemption from Licensing) Order

Telecommunication (Hong Kong Telephone Company) (Exemption from  
Licensing) (Fees) (Amendment) Order 1986..... 159

## Factories and Industrial Undertakings (Asbestos) Special Regulations 1986

Factories and Industrial Undertakings (Asbestos) Special Regulations 1986  
(Commencement) Notice 1986 ..... 160

## Sessional Paper 1985-86:

No. 62—Annual Report of the School Medical Service Board for the year ended 31 March 1986.

No. 63—Report by the Trustee of the Police Children's Education Trust and Police Education and Welfare Trust for the period 1 April 1984-31 March 1985.

No. 64—Report of changes to the approved estimates of expenditure approved during the final quarters of 1985-86—Public Finance Ordinance: section 8.

No. 65—Clothing Industry Training Authority—Annual Report for the year 1985.

No. 66—Construction Industry Training Authority—Annual Report 1985.

No. 67—Pneumoconiosis Compensation Fund Board—Report for the year ended 31 December 1985.

No. 68—Report of The Select Committee on the future of the Hong Kong War Memorial Fund.

**Oral answers to questions****Central credit information bureau**

1. MR. SOHMEN asked: *In the light of the rapid increase in the volume of personal loans in recent years, and the attendant risk of fraud being perpetrated on*

*banks and deposit-taking companies by unscrupulous individuals, would Government support an industry effort to establish a central credit information bureau in Hong Kong by appropriate legislation which may need to include, inter alid express waivers of bank secrecy provisions as well as the mandatory participation of all authorised financial institutions in such a bureau?*

FINANCIAL SECRETARY: Sir, I have recently received a similar proposal from the Hong Kong Foreign Bank Representatives Association. A credit information bureau is an interesting idea, but essentially one for the banking community, at least in the first instance. I have accordingly asked the association to take the matter up with the Hong Kong Association of Banks. They have now done so.

I can certainly understand why banks would want more information on borrowers in order to assess the latter's credit-worthiness with more precision. There are, however, other considerations as Mr. SOHMEN has hinted. How would borrowers like the idea of their bankers sharing confidential information on them? What are the implications on a banker's duty to maintain secrecy about his customer's affairs? Not all borrowers are unscrupulous.

I have an open mind on the proposal, and await the views of the Hong Kong Association of Banks. If a consensus emerges in favour of the idea, I would be happy to give it sympathetic consideration, taking into account, as we always do, the wider economic considerations.

MR. SOHMEN: *Is the Financial Secretary aware that there appears to be no strict legal prohibition against banks divulging information on their customers' accounts but this is simply an implied term of the contract between the bank and its client which contractual provisions could of course, be amended to take away the reservations expressed by the Financial Secretary?*

FINANCIAL SECRETARY: Sir, I am certainly now aware that there is an implied term in the contract because Mr. SOHMEN has told me so. But whether, in fact, that implied term should be altered by legislation is a very difficult question. As I have said, we will have to take into account all the wider economic considerations and, indeed, whether such legislation is appropriate for Hong Kong today.

MR. MARTIN LEE: *Sir, would the Financial Secretary kindly elaborate on what he means by the last few words in his answer, '—the wider economic considerations'.*

FINANCIAL SECRETARY: Yes, Sir, what I had in mind basically was what effect any legislation that we might enact would have on the attraction of Hong Kong as a financial centre. At the moment, as Members know, Hong Kong is a very open economy and people are allowed to move their money around the world as they wish. We believe that such an environment is undoubtedly in our long-term economic interests. I would have to consider, before proposing any legislation, whether that legislation prejudiced our position as an open economy in any way.

### Police action in respect of traffic offences

MR. LAU asked (in Cantonese): *Will the Government inform this Council whether police officers performing their duties have the responsibility to stop or correct a motor driver before he/she actually commits a traffic offence, or should a police officer simply wait for a driver to commit an offence and then take prosecution action?*

ATTORNEY GENERAL: Sir, section 10 of the Police Force Ordinance states that the duties of the police force shall be to take lawful measures (among other things) for:

- (a) preserving the public peace;
- (b) preventing and detecting crimes and offences;
- (c) preventing injury to life and property;
- (d) apprehending all persons whom it is lawful to apprehend and for whose apprehension sufficient grounds exist; and
- (e) controlling traffic and public thoroughfares and removing obstructions therefrom.

What can and should be done by a police officer carrying out those duties must depend on the facts and circumstances of each particular case, whether it is a traffic matter or something more serious.

When a police officer sees a person who acts as if he is about to commit an offence, he can try to prevent it. But he can only do so if he has the time and resources with which to act, if he is close enough to do so effectively, if the person's action is sufficiently unequivocal to permit of no innocent explanation, and if public safety is not endangered.

In many cases, a police officer will be unable to prevent the offence occurring, and thus he will be left to take action only after the event. Whether or not he then decides to take enforcement action is a matter for the individual judgment of each police officer.

In traffic cases, it is rarely possible for a police officer to know in advance that a motorist is about to commit a traffic offence. In this respect, motorists are less than helpful. And events usually take place so rapidly that a police officer is unable to prevent an offence occurring without endangering his own life or those of members of the public. He is thus usually left with the discretion and decision as to whether and, if so, how to enforce the law.

MR. LAU (in Cantonese): *Sir, when a police officer is standing at a junction of two roads and when he sees a driver indicating that he would like to turn left, but actually at that junction he is not permitted to turn left, and if the police officer can see very clearly that the driver intends to turn left, in such circumstances isn't it true that the police officer should indicate to the driver that he should not turn left, instead of deliberately standing there and waiting for him to turn left and then to stop the driver and enforce the law?*

ATTORNEY GENERAL: Well, Sir, I tried to indicate in my answer the factors that affect the way in which a police officer will carry out his duties in circumstances such as those so graphically described by Mr. LAU Wong-fat. It is obviously difficult to expect police officers to leap out into roads waving hands at individual motorists who appear about to do something which is forbidden; there are other considerations for their own safety which obviously may weigh heavily in their mind. Sir, I have really nothing more I can add about the general principles. I can only say to Mr. LAU Wong-fat that if any particular incident has occurred which he wishes to have considered in detail, then I would invite him to let me have particulars of it and I shall be glad to forward that to the Commissioner of Police for particular comment.

MR. TAI: *Sir, in the light of the Attorney General's answer, it seems that there is a lot of discretionary power left to the police on whether to prosecute. May I ask the Government as to whether there is any standard guideline to the police as to whether to prosecute in a minor traffic case or to exercise its discretionary power?*

ATTORNEY GENERAL: I am glad that has been raised because in traffic offences and those situations relating to traffic, officers are officially encouraged to exercise discretion and to administer a verbal caution or warning where the circumstances permit. Such circumstances would include trivial or minor breaches of traffic regulations, situations where the offence has been committed as a result of what appears to be a genuine mistake or a misunderstanding on the part of the motorist and cases where no harm has been done as a result of the breach of the law and the offender, having acknowledged error, appears to have learned from it. And this aspect of enforcement is stressed during a police officer's initial training in the Police Training School and it is re-emphasised from time to time after he has begun operations. Explicit written instructions regarding the exercise of discretion and a sensible use of verbal warnings are officially promulgated throughout the police force.

MR. PETER C. WONG: *Sir, may I ask the Attorney General what he means by, '—in this respect motorists are less than helpful' in paragraph 5 of his answer?*

ATTORNEY GENERAL: Sir, motorists are not good enough to indicate explicitly to police officers that they are about to break the law; life would be easier for police officers if motorists were to be courteous to that extent.

### **Helicopter services**

3. MR. LI asked: *Would the Government inform this Council of the current position in regard to:*

- (a) *the proposed development of a domestic helipad network and provisions for commercial helicopter operations at Kai Tak Airport; and*

(b) *the proposed development of an international heliport and provisions for international helicopter operations, and whether these provisions would include helicopter services between Hong Kong, Shenzhen and Macau?*

FINANCIAL SECRETARY: Sir, although we are not actively engaged in the development of a domestic helipad network, a number of suitable sites in major towns in the New Territories have been identified. However, so far there appears to be little commercial demand, and to date no one has expressed any desire to acquire and develop any of the sites.

With regard to commercial helicopter operations at Kai Tak, there is a need to give priority to the movements of an increasing number of fixed-wing commercial aircraft using the single runway at the airport. And the valuable around space and existing facilities are best reserved for aircraft providing international, fixed-wing services. These services are of great importance to Hong Kong's economy.

Lastly, as to the development of an international heliport, a possible site for the development of an international heliport adjacent to the Shatin/Meisha Ferry Terminal is currently under investigation. Should it prove suitable, and should the necessary facilities be provided by a developer, international services could be operated to and from it, subject, of course, to all the usual arrangements and authorisations required for such services.

MR. LI: *Sir, can commercial helicopter operations from Kai Tak Airport be expected in the near future?*

FINANCIAL SECRETARY: No, Sir.

MR. SOHMEN: *Sir, does the Financial Secretary's reference to 'reserving valuable facilities at Kai Tak Airport for international fixed-wing services' mean that fixed wing general aviation facilities could be considered, bearing in mind that with much increased short distance cross-border traffic, such facilities might see a demand in the next few years?*

FINANCIAL SECRETARY: Sir, the space at the airport is at a premium. It is, as I have said, a single runway airport, it is not capable of very extensive expansion. The use to which the airport is put in future will have to take into account, as I have said, that which is of greatest economic benefit to Hong Kong.

MR. LEE YU-TAI: *Sir, may I refer to the final paragraph of the answer and ask if we have identified any potential routes for international helicopter services, as helicopters do not fly very long distances?*

FINANCIAL SECRETARY: No, Sir, we haven't identified any routes. As I have tried to indicate in my answer, whilst we are prepared to facilitate helicopter services by the provision of sites, we really depend upon helicopter operators to come to us with proposals.

### **Private tutorial schools**

4. MRS. NG asked (in Cantonese): *Will Government inform this Council what actions are being taken to monitor private tutorial schools and whether the Government considers it necessary to amend the existing legislation to tighten up the control measures for this type of school?*

SECRETARY FOR EDUCATION AND MANPOWER: Sir, the Education Department registers all schools falling within the ambit of the Education Ordinance. Private tutorial classes are included if they fall within the definition of a school in the Ordinance, which is an institution, organisation or establishment which provides education for 20 or more persons during any one day, whether or not at the same time.

All registered schools are supervised by the department through regular inspections. This includes the investigation of any complaints received and remedial action required.

It would be possible to increase the scope of the Education Department's supervision by amending the Education Ordinance so that registration under the Ordinance is required for institutions providing education for a smaller number than the present number of 20 or more persons. To do so, however, would result in a considerable increase in the supervisory commitments of the Education Department, with the consequential need for increased staffing resources. Before such a step is taken the Government would have to be convinced that the existing problems justified such increased expenditure of public funds, or that the problems could not be resolved by other means.

Judging by the small number of complaints received, I do not consider that the problems arising from the operation of private tutorial classes are of such an extent as to justify the change in the Ordinance I have mentioned. I consider that the problems can be more appropriately dealt with by making the public more aware of what can be properly expected from private tutorial classes and of the advice and assistance available to the public both from the Consumer Council and the District Education Offices of the Education Department.

MRS. NG (in Cantonese): *Sir, in paragraph 4 of the answer, it is mentioned that there are some complaints received. Do they include private tutorial classes which have not been registered and which provide education for less than 20 pupils?*



SECRETARY FOR EDUCATION AND MANPOWER: Yes, Sir, over the last three years I can quote the number of complaints received concerning unregistered tutorial schools. For the last few years, figures are as follows: 1983-1984, 15 cases; 1984-1985, 16 cases and the present school year, 10 cases, of which the great majority do not fall within the Ordinance, and only five cases have been registered as schools.

DR. IP: *Sir, I would be interested to know how this figure of 20 comes about. Is this an arbitrary figure or was it decided for any particular reason?*

SECRETARY FOR EDUCATION AND MANPOWER: No, Sir, this is a very pragmatic figure because it was based on the 1971 Ordinance which was based on the assumption that 20 is the minimum number to form a class and therefore a school with a minimum of 20 pupils is required to be registered under that Ordinance.

MR. LEE YU-TAI (in Cantonese): *Sir, I would like to ask a question. For those schools which do not need to be registered, do their school fees have to be approved by the Education Department?*

SECRETARY FOR EDUCATION AND MANPOWER: If they do not fall within the Ordinance, the department cannot control them, whether they be fees or teachers or courses.

DR. IP: *Sir, how does the department know whether an unregistered school has in actual fact got less than 20 students per day or at any particular time?*

SECRETARY FOR EDUCATION AND MANPOWER: Sir, normally, upon complaints received, a number of inspections are made and they are of course surprise checks, and very often they are done several times a day to ensure that they do not use the Ordinance's loophole to have more than 20 persons at any one time during the same day, so it does require a lot of manpower to inspect cases of this kind.

MRS. FAN: *Sir, since most of the complaints involve schools that are not registered and therefore not covered by the Ordinance, what possible action can the department take in such cases? Could the Secretary give a brief outline?*

SECRETARY FOR EDUCATION AND MANPOWER: Sir, we are talking about over 2 300 schools in Hong Kong with 1.3 million students. The number of registered tutorial schools is only 83, both day and evening schools, and outside these registered schools there are only 41 cases of complaints in the last three years, so we are talking about a very small number. Now if our Ordinance does not control these schools, I am sure they are covered by other Ordinances in Hong Kong. If they do break the law they will be prosecuted either by civil or criminal action, so I am sure this particular group of very small number is well covered by other Ordinances in Hong Kong.

MRS. FAN: *Sir, does it really mean that in fact under the present situation, the Education Department can do very little to deal with these complaints, and therefore have to refer them to other authorities?*

SECRETARY FOR EDUCATION AND MANPOWER: Yes, I can elaborate on this, Sir, because we do have an action committee with the Consumer Council since 1974 which is to look at all these problems concerning schools such as textbooks supplies and fees charged. This committee meets three times a year and we look at all these problems regularly and we do take action jointly, and the results have been very fruitful in the last 12 years, so I can assure Mrs. FAN that this will continue to be handled under this committee in the future.

### **Rents for commercial premises in public housing estates**

5. MR. ANDREW WONG asked: *Will Government inform this Council what measures have been or will be taken by the Housing Authority to determine and review the rentals of (i) those public housing shop tenants who face strong competition from shop tenants in adjacent commercial complexes who enjoy lower rents; and (ii) those public housing shop tenants who face a diminishing clientele as a result of public housing population migration in those public housing estates connected with the extended redevelopment programme?*

SECRETARY FOR HOUSING: Sir, it is the Housing Authority's policy to let its commercial premises on a commercial basis. Tenancies are normally renewed once every three years in accordance with the terms of the tenancy agreement and rents are reassessed at the same time. These reassessments will take account of all factors that may affect the business potential of the premises concerned, including competition from shops in the vicinity.

Special measures are taken with regard to those shops the business of which may be affected by the Extended Redevelopment Programme. The rents of all shops in the 26 blocks concerned were frozen on announcement of the programme on 21 November 1985. Subsequent to that, the rents of these shops are being reassessed once every six months to take into account changes in market value arising from factors such as the reduction of the resident population. The first such review was done last April. As a result, the rents of 16 tenancies in Kwai Fong Estate were reduced by 8 to 45 per cent.

For shops in the vicinity of the blocks included in the Extended Redevelopment Programme, in addition to the normal reassessment of rents on renewal of tenancy, their rents are also reassessed once every six months. They will be reduced if the reassessment indicates that the rents being paid are above the reassessed market rent.

MR. ANDREW WONG: *Sir, would the Secretary for Housing inform this Council whether the Housing Authority is prepared to consider granting rent reductions to shop tenants not in the extended redevelopment programme during the current term of the tenancies if they really face very strong external competition from newly developed commercial complexes adjacent to them?*

SECRETARY FOR HOUSING: Sir, apart from very exceptional circumstances, like the premises affected by the extended redevelopment programme there is no allowance for mid-term reviews. The tenancies bind both parties to the agreed terms and the Housing Authority does not seek mid-term upward revisions when business is good. As these tenancies have been freely entered into as a result of a commercial decision, the authority considers it fair for tenants to shoulder the risk of business dropping in the middle of a tenancy period.

MR. ANDREW WONG: *Sir, in paragraph 1 of the Secretary for Housing's answer, he referred to rental reassessments. I understand rental reassessments are not only done by the Rating and Valuation Department but also done by the newly established Commercial Properties Division of the Housing Department. Will the Secretary for Housing explain what roles are played respectively by the Commercial Properties Division and the Rating and Valuation Department, and what steps are being taken by these two separate units to ensure that the rents so assessed approximate the previous market rent?*

SECRETARY FOR HOUSING: Yes, Sir. Until towards the end of 1985, rental assessments were done by the Commissioner for Rating and Valuation. Since then the Housing Authority has established a Commercial Properties Division to improve its management with a view to enhancing the trading potential of the commercial properties. The division is concerned with market research and design of commercial centres, and the regular promotion of existing shopping centres. It also brings in-house the valuation unit which I am sure will facilitate closer contacts with estate staff and tenants, and this will help in reflecting more closely the individual circumstances of each case in rental reassessment exercises.

### **Red tide in Tolo Harbour**

6. MR. CHEONG-LEEN asked: *Will the Government inform this Council what is the latest situation regarding 'red tide' in Tolo Harbour and what are the short-term and long-term solutions to ameliorate the situation?*

SECRETARY FOR HEALTH AND WELFARE: Sir, red tides were a rare occurrence in Tolo Harbour in the 1970s, but the frequency has increased markedly since then. Eleven occurrences were recorded in Tolo Harbour between 1980 and 1982, 11 in 1983, 15 in 1984 and 16 in 1985. Fourteen occurrences in the harbour have

been recorded so far this year. Also in recent years red tide affected areas have become more widespread and a greater variety of the causative organisms, called dinoflagellates, has been identified.

Red tide is a worldwide phenomenon, usually observed in coastal waters. Studies internationally have not yet conclusively established the causes of red tides. It is clear, however, that pollution is a factor which makes the occurrence of red tides more likely.

In that some, though not all, red tides are associated with fishkills, they may affect the viability of mariculture zones. They may also constitute a public health risk, particularly through the ingestion of seafood contaminated by toxic dinoflagellates. However, the presence in substantial numbers of toxic species of dinoflagellates has been confirmed in only one of the recorded incidents of red tide in Hong Kong: this was in October 1983. Some shellfish contaminated by toxic dinoflagellates were found in Tolo Harbour also in March 1984.

Regarding short-term solutions, the Government will continue with its control programme for minimising the harm done by red tides. A water sampling programme is conducted in Tolo Harbour and some other inner bays every two weeks and this can give early detection of red tide causative organisms. Routine toxicity testing of shellfish from the market and in marine habitats is carried out. There are also standing arrangements for fishermen and the staff of departments which are active in the marine environment to report sightings of red tides to the Agriculture and Fisheries Department. Mariculturists may then be assisted in the temporary relocation of their fish rafts to unaffected waters and advised on other remedial measures.

Whenever a red tide which is suspected to be toxic affects any area of fish or shellfish farming, farmers are warned not to sell their produce for human consumption pending tests. If the tests show that the fish or shellfish are not fit for human consumption, they are destroyed.

These standing arrangements are designed to ensure that seafood which is rendered unfit for human consumption as a result of red tides, does not reach the markets.

In the event of red tide outbreaks in beach waters, warning signs are erected to alert the public.

In the longer term, it is important that pollution by nutrients should be reduced since this is the only one of the known causative factors of red tides which is amenable to control. Present measures for the removal of nutrients in sewage effluents together with proposed controls on the disposal of animal wastes will go a long way to achieve this reduction.

MR. CHEONG-LEEN: *In view of the worsening situation especially in the first half of this year, Sir, is the Environmental Protection Department working on a long-term solution to this problem?*

SECRETARY FOR HEALTH AND WELFARE: Yes, Sir, the Environmental Protection Department and other parts of the Government are endeavouring to reduce the pollution in Tolo Harbour. Specific plans include the establishment of district working groups in Sha Tin and Tai Po and action is in hand to improve the main rivers flowing into Tolo Harbour by the control of pollution discharges. Also we would hope that the Water Pollution Control General Regulations would help to at least contain pollution in the short term and improve it in the longer term. Following the completion of the consultation exercise held in the earlier part of this year, proposals for the control of pollution caused by animal wastes are being finalised for implementation in Tolo Harbour. Various engineering solutions for reducing the nutrient load into Tolo Harbour from the Sha Tin and Tai Po Sewage Treatment Plants are also being studied with the view to the early implementation of a cost-effective solution. These various measures should lead to a reduction of the pollution load in the area. The last two of these measures are particularly important as they would reduce the pollution by nutrients.

DR. CHIU: *Sir, will the Government inform this Council how routine is the toxicity testing of shellfish in the market and in marine habitat carried out?*

SECRETARY FOR HEALTH AND WELFARE: Sir, under the Food Safety Surveillance Programme samples of seafood including shellfish are taken regularly by the Health Inspectorate from retail outlets for tests for contaminants as well as toxicity. Since January 1986 additional arrangements have been made with shellfish farmers for carrying out periodic examination of shellfish taken from shellfish beds in Tai Po, Sai Kung, North District and the outlying islands. I understand that these various measures are conducted monthly. Also in parallel with these efforts to ensure food safety, the Environmental Protection Department monitors the level of toxicity in shellfish in their natural habitat in Tolo Harbour as part of its general environmental monitoring programme. The toxicity tests themselves are conducted by the University of Hong Kong on behalf of the Government. The EPD samples are taken monthly at present.

MR. CHUNG: *Sir, will the Secretary inform this Council what would be the result if the farmers do not follow the standing arrangements and whether the standing arrangements are backed up by law enforcement?*

SECRETARY FOR HEALTH AND WELFARE: Sir, there is power in the Public Health and Urban Services Ordinance for the sale of seafood which is suspected to be contaminated to be banned and I believe, Sir, that such measures have been taken when circumstances so warrant it.

DR. CHIU: *Sir, would the Government inform this Council when suspected toxic fish or shellfish are barred from sale, are the mariculturists in question entitled to any compensation?*

SECRETARY FOR HEALTH AND WELFARE: Sir, I am not aware of the compensation arrangements but I will write to Dr. CHIU on this point. (Annex I)

## Statements

### **Report of changes to the approved estimates of expenditure approved during the final quarter of 1985-86—Public Finance Ordinance: section 8**

FINANCIAL SECRETARY: Sir, in accordance with section 8(8)(b) of the Public Finance Ordinance, I now table for Members' information a summary of the supplementary provision for the final quarter of the financial year 1985-86. Supplementary provision of \$1,903 million was approved. \$1,383 million of this sum arose from the 1985 Civil Service and subvented sector pay adjustments.

Of the amount of \$1,903 million, \$1,653 million is offset by savings under the same head or other heads of expenditure or by the deletion of funds under the additional commitments votes. The remaining \$250 million is net supplementary provision. Items in the summary have been approved either by Finance Committee or under delegated authority. The latter have been reported to the Finance Committee in accordance with section 8(8)(a) of the Public Finance Ordinance.

### **Report of the Select Committee on the future of the Hong Kong War Memorial Fund**

MR. CHAN KAM-CHUEN: Sir, laid on the table this afternoon is the report of the Select Committee appointed by this Council on 4 December 1985. The terms of reference were: firstly to consider the administration of the Hong Kong War Memorial Fund established under the Hong Kong War Memorial Fund Ordinance (Chapter 1026) and to make recommendations on the future administration of the fund having regard to the relevant legislation and the interests of the beneficiaries of the fund and the public interest; and secondly, to report on the appropriate measures to be taken with a view to implementing those recommendations.

The War Memorial Fund was set up almost 40 years ago by donations and a matching Government grant to provide assistance to those who fought in the defence of Hong Kong in December 1941 and who subsequently became prisoners of war and to their dependants. Most of those who served and were imprisoned have reached their retirement and many have turned to the War Memorial Fund to supplement their income. A four-fold increase in the number of beneficiaries since 1979 combined with a sequence of measures to improve access to these benefits through partial relaxation of tightly drawn criteria caused the assets of the fund to become depleted in 1985. The fund was then underwritten from public funds voted by the Finance Committee of this Council.

The Finance Committee in April 1985 requested that the War Memorial Fund Committee conduct a review of their procedures. This review was completed in July 1985 and the Fund Committee in a strongly worded Chapter 7 considered themselves blameless for the current situation. The Fund Committee then made a recommendation for the fund to become a compensation fund for war related death or disability. This would further have increased the amount of funds needed to be voted and was at variance with the Government's policy on benefits to former prisoners of war as stated by the former Chief Secretary in this Council on 11 November 1982. A copy of this review was sent to all Members of this Council in November 1982.

We accept that the Fund Committee acted properly in taking the measures to relax the criteria for the award of grants as this was on the initiative and full knowledge of Government. However we recommend that assistance from the fund continue to be based on need. The measure of need must necessarily be subjective but we think that guidance is provided by the specific reference to the provision of assistance to the beneficiary in the sub-clauses of section 4 of the Ordinance. Such assistance should, we believe, be provided to ensure a reasonable standard of living for the beneficiary who should be relieved from the burden of fear for his maintenance and livelihood. There may now be only some 20 local and some 100 overseas applicants yet to apply.

We wish to place on record our appreciation of the co-operation given by the Secretary for Health and Welfare, the hon. John CHAMBERS, the Chairman and Secretary of the Hong Kong War Memorial Fund Committee, the hon. Sir Albert RODRIGUES and Mr. Eric JOHNSON, and Messrs John MITCHELL, Jack EDWARDS and Maximo CHENG of the prisoners of war and veterans associations.

I also would take this opportunity to express my personal appreciation of the time and effort that my colleagues on the Select Committee and the Clerk have given to this important task.

## **Government Business**

### **Motion**

#### **FIXED PENALTY (CRIMINAL PROCEEDINGS) ORDINANCE**

THE SECRETARY FOR TRANSPORT moved the following motion:

- (a) That the Schedule to the Fixed Penalty (Criminal Proceedings) Ordinance be amended by deleting item 2 and substituting the following—

- '2. Section 41 Driving in excess of speed limit by more than 15 km/h, other than where item 2A or 2B applies \$200
- 2A. Section 41 Driving in excess of speed limit by more than 30 km/h, other than where item 2B applies \$200
- 2B. Section 41 Driving in excess of speed limit by more than 45 km/h \$200';

(b) that this resolution shall come into operation on 28 July 1986.

He said: Sir, I move the resolution in my name under section 12 of the Fixed Penalty (Criminal Proceedings) Ordinance.

The schedule to the Ordinance is amended so that its descriptions of speeding offences are the same as those in the schedule to the Road Traffic (Driving-offence Points) Ordinance, which was amended on 9 July 1986. The amendments in this resolution will come into effect on 28 July 1986, the same effective date as that of the Road Traffic (Driving-offence Points) (Amendment) Ordinance 1986.

*Question put and agreed to.*

### **First Reading of Bills**

#### **SUPPLEMENTARY APPROPRIATION (1985-86) BILL 1986**

#### **FIRE SERVICES (AMENDMENT) (NO. 3) BILL 1986**

#### **KOWLOON-CANTON RAILWAY CORPORATION (AMENDMENT) BILL 1986**

#### **PHARMACY AND POISONS (AMENDMENT) BILL 1986**

*Bills read the First time and ordered to be set down for Second Reading pursuant to Standing Order 41(3).*

### **Second Reading of Bills**

#### **SUPPLEMENTARY APPROPRIATION (1985-86) BILL 1986**

THE FINANCIAL SECRETARY moved the Second Reading of: 'A Bill to approve a supplementary appropriation to the service of the financial year which ended on 31 March 1986'.



He said: Sir, I move that the Supplementary Appropriation (1985-86) Bill 1986 be read a Second time.

Section 9 of the Public Finance Ordinance states, 'If at the close of account for any financial year it is found that expenditure charged to any head is in excess of the sum appropriated for that head by an Appropriation Ordinance, the excess shall be included in a Supplementary Appropriation Bill which shall be introduced into the Legislative Council as soon as practicable after the close of the financial year to which the excess expenditure relates'.

The accounts for the financial year 1985-86 have been finalised by the Director of Accounting Services. Actual revenue amounted to \$41,240 million and total expenditure to \$39,798 million. The final surplus is thus \$1,442 million as compared with an estimated surplus of \$1,177 million mentioned in my predecessor, Sir John BREMRIDGE's concluding speech in the Budget debate last April. As Members will recollect, the deficit originally envisaged in the 1985 Budget was \$960 million.

The expenditure charged to 54 heads is in excess of the sum appropriated for those heads by the Appropriation Ordinance 1985. This is because sufficient offsetting savings could not be found within the heads concerned. In accordance with section 9 of the Public Finance Ordinance, this excess has been included in the Supplementary Appropriation (1985-86) Bill 1986 now before Members. The Bill seeks to give final legislative authority for the amount of supplementary provision approved in respect of particular heads of expenditure by the Finance Committee or under powers delegated by it.

The *total* net supplementary appropriation required in respect of the 54 heads of expenditure is \$3,098 million. This excess is largely accounted for by the 1985 salaries revision for the Civil Service (\$939 million) and Government subvented organisations (\$450 million) and for the payment of personnel related allowances (\$160 million). Another major contributing factor is the payment to the Mass Transit Fund to enable the first equity injection to be made during the 1985-86 financial year (\$1,500 million).

Savings made in other subheads are due to continued tight control over public expenditure, and I would like to thank the controlling officers and others who have contributed to restraint.

Sir, I move that the debate on this motion be adjourned.

*Motion made. That the debate on the Second Reading of the Bill be adjourned.*

*Question put and agreed to.*

### **Fire Services (Amendment) (No. 3) Bill 1986**

THE ATTORNEY GENERAL moved the Second Reading of: 'A Bill to amend the Fire Services Ordinance'.

He said: Sir, I move that the Fire Services (Amendment) (No. 3) Bill be read the Second time.

The Government has for some time been concerned about the dangers of fire hazards in multi-storey buildings, particularly obstructions to escape routes. Such hazards endanger the lives of people living and working in the buildings. They also impede firemen in their access to fires.

At present the Director of Fire Services lacks the powers required to tackle this problem effectively. All he can do is to issue abatement notices requiring fire hazards to be removed within a given period of time. Only when an abatement notice has been ignored is an offence committed. This state of the law provides no real incentive to keep common areas free from hazards. Because there is no immediate offence many will take a risk and deliberately block escape routes in the knowledge that they cannot be punished until after a notice has been served and they have had the chance to remove the obstruction—at least for a time. Because if later the escape route is found again blocked, the director must first serve another abatement notice and so it may go on.

It was the fire at the Blue Box Factory Building in Aberdeen in 1984 which renewed public concern about storage of goods in the escape routes within multi-storey buildings. That fire burned for three days causing millions of dollars worth of damage, partly because of the difficulties faced by firemen in working their way into the building. In response to that concern, the Administration examined the existing legislation to determine what changes were required to create appropriate deterrents for these malpractices. The result is the Bill before the Council today. I may add that in considering these amendments the Administration took account of the availability of storage space in industrial areas to see whether this was a continuing constraint on the ability to store goods safely. The conclusion was that lack of storage space was no longer the problem it once had been.

The proposals in the Bill are three pronged. There are those aimed at enabling the Director of Fire Services to deal more effectively with hazards that have recurred. There are those aimed at directly deterring people from creating certain especially dangerous fire hazards. And there are those aimed at increasing the overall effectiveness of the legislation in this field.

The most significant of the proposed amendments are those which would make it a criminal offence to allow a fire hazard which has already been the subject of a 'fire hazard abatement notice' to recur within 12 months; or to leave obstructions in the corridors, staircases and other common areas of a building which form part of the means of escape from it; or to lock any means of escape such that it cannot be opened from the inside without the use of a key.

Members may think that it would be highly irresponsible for anyone to commit such offences. So it is right to propose fairly stiff penalties for them. It is to be hoped that the penalties now proposed will provide a suitable deterrent, and that standards of fire safety, particularly in multi-storey buildings, will rise in consequence.

Sir, representatives of the private sector, in both commerce and industry, have been informed of the proposed amendments. All have supported the spirit of the proposals and have so far raised no objections to them.

Sir, I move that the debate on this motion be now adjourned.

*Motion made. That the debate on the Second Reading of the Bill be adjourned.*

*Question put and agreed to.*

### **KOWLOON-CANTON RAILWAY CORPORATION (AMENDMENT) BILL 1986**

THE SECRETARY FOR TRANSPORT moved the Second Reading of: 'A Bill to amend the Kowloon-Canton Railway Corporation Ordinance to provide for the construction of the North-west Railway; for the operation by the Kowloon-Canton Railway Corporation of that railway and of a bus service in the vicinity within an area to be termed the North-west Transit Service Area; to make consequential amendment to other laws including provision for amending the franchises of bus operations in the North-west Transit Service Area, and for matters ancillary thereto or connected therewith'.

He said: Sir, I move the Second Reading of the Kowloon-Canton Railway Corporation (Amendment) Bill 1986.

The Bill provides a legal framework for the Kowloon-Canton Railway Corporation to construct and operate a Light Rail Transit System in the north-western New Territories and to operate local bus services in that part of the territory.

In view of the public interest and concern that has been engendered, I should first of all like to outline the background to and the reasons for proceeding with the Light Rail Transit System. In planning the development of Tuen Mun New Town and the north-western New Territories, careful thought was given as to the best form of public transport for the region. The new town was planned from the outset with an 'exclusive public transport right of way' segregated from the ordinary road network. A detailed evaluation of the respective merits and demerits of buses, LRT and other modes was carried out to determine which would best meet the needs of the area. The LRT was finally chosen because it blends the modern technology and comfort of the electric railway with the convenience and easy accessibility of the tram and because it is fast and reliable without the smoke, noise and congestion which are all too-familiar in many parts of Hong Kong. The Light Rail System with its supporting feeder bus services in a dedicated Transit Service Area was explained to and discussed with the Tuen Mun and Yuen Long District Boards at the time two years ago and

received their support. It was on this basis and with this community support that the KCRC undertook to construct and operate the LRT system: The corporation is now contracted to build the system, the first phase of which is due to be completed by mid-1988. Thus, the LRT has become an integral part of the transport infrastructure of Tuen Mun New Town and the north-western New Territories. With a carrying capacity which is capable of meeting demand well into the next century, it is an investment not only for the present but the long-term future as well. It is in essence a visible form of Government's commitment to the development of the north-west.

I should perhaps take the opportunity to explain the concept of the Transit Service Area, which is intended to cover the whole of the Tuen Mun District and that part of the Yuen Long District west of the eastern end of Yuen Long town. Within the Transit Service Area, public transport services will be fully integrated, with the LRT functioning as the backbone and other modes playing a complementary role. I am aware that concern has been expressed in some quarters that as the LRT will be the only mass carrier in the Transit Service Area, people will be left with no choice if KCRC were to charge very high fares on its system. This concern though understandable is unfounded. The KCRC has stated publicly that it will adopt a realistic fare policy and that fare levels will be kept reasonable. As an indication of LRT fare levels in cash terms, were the system to be operating today, the corporation in briefing the Tuen Mun and Yuen Long District Boards has stated that short distance passengers may be charged more or less the same fare as buses, that for medium distance trips passengers may be paying at most 20 or 30 cents more than buses, and that for long journeys a slightly higher premium. The corporation is not a publicly listed company which has to maximise profit for its shareholders. It is wholly financed by the Government and is governed by a board of directors appointed by the Governor. The board comprises members from this Council, the Regional Council, the Urban Council and district boards who are there to represent the public interest. There will in effect be a three-tier system of monitoring LRT fares and service: the Traffic and Transport Committees of the two district boards, the KCRC board itself with its public representatives and finally the Governor in Council who is empowered under section 6 of the Kowloon-Canton Railway Corporation Ordinance to give directions to the corporation in the public interest.

There has been criticism also that the proposed measures for an integrated public transport system would amount to granting a monopoly to the KCRC in the Transit Service Area. Perhaps I should emphasise that the LRT will not be placed in a monopoly situation: external KMB services, residential coaches, red and green minibuses and taxis will all continue to operate in the region. There are two main reasons why it is undesirable to allow directly competing bus services to operate in the Transit Service Area. Firstly, unlike the MTR which is an additional mode serving existing urban corridors of high passenger demand, the LRT is to be built as the prime people-mover in the developing new town of

Tuen Mun, which is the same size of Kowloon, and the north-west where there is insufficient internal demand to support more than one major mode of public transport. Secondly, the LRT is intended to be a new form of transport in place of a system that relies heavily on buses. In other words, what is proposed is the replacement of the internal franchised bus service by the LRT. The LRT system with its feeder routes will provide a comprehensive and convenient service with sufficient capacity to cope with traffic demand well into the next century. Hence there will be a continuing role to play for buses on feeder routes as well as external services, and in this regard the Government would welcome co-operation between the KCRC and KMB on the provision of feeder services within the legal framework set out in this Bill. The actual details as to how this could be achieved would be a matter for discussion and negotiation between the two.

And now, Sir, the main points of the Bill.

The Bill can be divided into five major components. The first part of the Bill is enabling in nature in that it amends the existing Kowloon-Canton Railway Corporation Ordinance by expanding the scope of the Ordinance so that the KCRC may take on the LRT project as both owner and operator. More specifically, clause 5 of the Bill confers on the corporation the power to construct and operate the LRT system and to operate bus services within that part of the north-western New Territories to be called the 'North-west Transit Service Area'. By extending the provisions of section 4 of the principal Ordinance to cover the LRT, this clause also empowers the KCRC, *inter alia*, to determine the fares, routes and frequencies of the LRT system and its associated bus network. Such powers would provide the necessary flexibility to enable the KCRC to adjust its services in response to demand. In order to enable the corporation to raise sufficient funds to finance the project, the Financial Secretary has increased the borrowing limit of the corporation from \$1.5 billion to \$3 billion. Accordingly, clause 8 of the Bill sets out this new borrowing limit of the corporation. Clause 15 extends the corporation's by-law making powers to the LRT and its bus services.

The second major aspect of the legislation deals with the measures which are required for the development of an integrated public transport system in the North-west Transit Service Area. Clause 3 provides for the boundaries of the North-west Transit Service Area to be defined by reference to a plan to be signed by the Director of Buildings and Lands and deposited in the Land Office. There is a provision under the clause for the boundaries of the Transit Service Area to be varied by the Commissioner for Transport with the approval of the Governor in Council and after consulting the KCRC. This is intended to provide some flexibility for minor adjustments to the Transit Service Area to be made for traffic management reasons. The Government currently has no intention to expand the North-west Transit Service Area to other parts of the territory.

Clause 22 amends the Public Bus Services Ordinance to empower the Governor in Council to amend a franchise under the Ordinance with or without the consent of the grantee so as to restrict or prohibit the taking up or setting down of passengers within the Transit Service Area. Such a provision is required to terminate the internal bus services currently operated by the Kowloon Motor Bus Company when the LRT comes into operation in August 1988. This clause also provides for compensation to be paid to the grantee of a franchise on a full and fair basis if the amendment of franchise by Government would result in pecuniary loss or damage to the grantee.

Clause 23 amends the Public Bus Services Regulations by introducing certain restrictions on the picking up and setting down of passengers in the North-west Transit Service Area: buses leaving the area would not be allowed to set down passengers until it has left the transit service area, whilst buses entering the Transit Service Area would, likewise, not be permitted to pick up passengers within the area. These restrictions are required to ensure that the use of the LRT will be maximised for internal travel in the Transit Service Area so that the passengers may benefit from greater economy of operation.

The third major aspect of the legislation concerns the control over the road traffic aspects of the LRT system and the buses to be run by the KCRC in the Transit Service Area. Clause 26 amends the Road Traffic Ordinance so that the appropriate traffic control provisions of that Ordinance will apply to light rail vehicles. This is required in order that there will be sufficient control on their operation to ensure public safety. It is for this reason that light rail vehicles will be treated like trams under the Road Traffic Ordinance. Clause 14 enables the Governor in Council to make regulations dealing with signs and indicators on the corporation's buses and to provide programmes, similar to those provided by bus operators under the Public Bus Services Ordinance, relating to the corporation's transport services in the Transit Service Area.

Fourthly, the Bill sets out the respective rights and responsibilities of the KCRC and the Government on the land to be used for operating the LRT system under the new Fifth Schedule. The main points to note are that the land over which the LRT track is laid would remain within the ownership of the Government, although the KCRC would have the right to use it for operating the LRT and to install ancillary facilities such as platforms at stops. The schedule is based on the agreement reached with the KCRC and being detailed and unambiguous, it leaves little doubt as to what rights each party has and who should be responsible for the various forms of maintenance.

Finally, the Bill makes some minor amendments to a number of related Ordinances.

Sir, let me emphasise that the public interest will be well defended and safeguarded by the three-tier system of monitoring I have mentioned: first, the Tuen Mun and Yuen Long District Boards, secondly the KCRC Board of Directors with its public representation, and thirdly the Governor in Council who has overriding authority under section 6 of the KCRC Ordinance.

The LRT will be the first public transport mode of its kind in Hong Kong, one that will provide a modern, air-conditioned, comfortable, convenient and efficient form of public transport at reasonable cost for residents of the north-western New Territories.

Sir, I move that the debate on this motion be now adjourned.

*Motion made. That the debate on the Second Reading of the Bill be adjourned.*

*Question put and agreed to.*

## **PHARMACY AND POISONS (AMENDMENT) BILL 1986**

THE SECRETARY FOR HEALTH AND WELFARE moved the Second Reading of: 'A Bill to amend the Pharmacy and Poisons Ordinance'.

He said: Sir, I move that the Pharmacy and Poisons (Amendment) Bill 1986 be read the Second time.

The Bill makes various amendments to the Pharmacy and Poisons Ordinance, some of which were recommended by the Working Party on the Practice of Pharmacy and Ancillary Matters, whose report was published in 1984. All of these proposed amendments have been supported by the Pharmacy and Poisons Board. A principal objective is to tighten control on the sale of poisons and pharmaceutical products at retail outlets.

The Ordinance already prohibits listed sellers of poisons, which is the category of medicine dealers who do not engage registered pharmacists, from selling any of the potent poisons in Part I of the Poisons List. They are not however specifically debarred from dispensing prescriptions. This situation is confusing to the public who cannot be expected to know whether a prescription contains a Part I poison and cannot therefore legally be dispensed by a listed seller. The Government has accepted the working party's advice that prescriptions should be dispensed only by the qualified pharmacists engaged by authorised sellers of poisons or in other approved outlets. Clause 2(b) of the Bill therefore clarifies the definition of dispensing to include the supply of medicine or poison on a prescription issued by a doctor irrespective of whether that medicine is in Part I of the Poisons List or not. Detailed arrangements prohibiting dispensing by listed sellers of poisons will be provided by way of subsidiary legislation.

The definition of 'sell' in the principal Ordinance does not include supply without payment and technically it would be possible for unauthorised persons to circumvent control by offering poisons and pharmaceutical products under the guise of free supply. Clause 2(c) is intended to remove this loophole.

Clause 5 provides for tighter control on the registration of premises of authorised sellers, who are the category of retail outlet that may sell Part I poisons, provided that they engage a registered pharmacist for this purpose. Under the present terms of the Ordinance the Pharmacy and Poisons Board has no power to reject a correctly submitted application for the registration of premises, and the applicant automatically becomes an authorised seller of poisons once his premises have been registered. Although the board may de-register the premises concerned when an authorised seller is found guilty of an offence, it cannot refuse to register the same premises again if the operator applies under a new name. Clause 5 will empower the Pharmacy and Poisons Board to grant or reject an application, or to impose conditions on registration, having regard to the personal suitability of the authorised seller and the suitability of the premises for the retail sale of poisons. Clause 9 enables regulations to be made providing for more detailed procedures to be prescribed and clause 10 provides for applicants aggrieved by a decision of the board on these matters to appeal to the Pharmacy and Poisons Appeal Tribunal.

To facilitate easy identification by the public, clauses 6 and 9 provide that authorised sellers of poisons should be permitted to display at registered premises a prescribed logo, which non-authorised persons would be prohibited from displaying.

In addition to these proposals to implement recommendations of the working party, the Bill also contains a number of other amendments proposed by the Pharmacy and Poisons Board, after consultation with the medical and pharmaceutical professions.

Clauses 3 and 4 revise the membership of the Pharmacy and Poisons Board and the committee of examiners to take into consideration the establishment of the Medical Faculty in the Chinese University of Hong Kong.

Clause 7 removes an unnecessary provision designed to restrict competition among listed sellers of poisons.

Clause 8 exempts doctors, dentists and veterinary surgeons from the requirement to maintain separate records on the supply of medicines provided that the details of such supplies are entered into clinical record cards kept for their patients.

Clause 11 widens the power of forfeiture by the Magistrate to include any pharmaceutical product with respect to which an offence has been committed. At present the power is applicable only to pharmaceutical products containing poisons.

Sir, I move that the debate on this motion be adjourned.

*Motion made. That the debate on the Second Reading of the Bill be adjourned.*

*Question put and agreed to.*



**BANKRUPTCY (AMENDMENT) BILL 1986****Resumption of debate on Second Reading (2 July 1986)**

MR. WONG PO-YAN: Sir, it has been pointed out by the Financial Secretary in moving the Bankruptcy (Amendment) Bill 1986 that the 15 per cent dividend provision in the existing Bankruptcy Ordinance has been manipulated by certain debtors to defeat the purpose of the provision for which it was made.

It is perhaps a little tardy not to move this amendment until the incidents of debtors opposing bankruptcy petitions or applying for annulment have been allowed to build up over the past two years. It is obviously inequitable that a debtor whose assets stood at \$1.49 million should be allowed to oppose a bankruptcy petition on the ground that his assets were inadequate, as required by law, to meet the minimum 15 per cent dividend of his total debt of \$10 million. It is all the more unjust that his creditors should be given the onerous task by law to try to prove the debtor's true financial situation. It is one thing for the creditors to feel convinced that the debtor did scheme to hide his assets, but, it is an entirely different matter for them to try to produce evidence concrete enough in support of their suspicion. In any event, this 15 per cent dividend provision has been found to be unsatisfactory in itself.

Indeed, I know of a case which took place some years ago when the debtor was able to take advantage of the 15 per cent dividend provision to avoid bankruptcy action. Yet, he was able to 'hide' his assets and, shortly after the court proceedings, was able to continue his trading. It is therefore necessary to plug this loophole to prevent the unscrupulous from benefiting from this provision unduly.

I am glad to see that priority has been given to this amendment so soon after the new Financial Secretary assumed office.

In supporting this Bill, I cannot stress more strongly the need to consider not simply the amount of the debtor's assets but the broader question of other circumstances of the case such as commercial morality, illegal dealings or faults or even *criminal* operations. I have no doubt that many a creditor would be prepared to put up with a smaller dividend if the debtors' malpractices were publicised in court. This is not a vindictive measure but one which helps to stop the unscrupulous from indulging in such practices. In the long run, it helps to build a more healthy trading sector in Hong Kong and enhances its reputation as a world commercial centre.

There is one further aspect of the Bill I should like to deal with. It concerns the power of the court to rescind a receiving order on the application of the Official Receiver (clause 4(b)). As presently drafted the clause empowers the

court to rescind an order at the request of the Official Receiver if the debtor's assets are less than 15 per cent of his liabilities. Although the clause confers a discretionary power upon the court it is felt, by the hon. John SWAINE, the hon. Peter C. WONG and other Members of the *ad hoc* group set up to study the Bill, that the clause should expressly state that the court must also be satisfied that it is desirable in all the circumstances of the case for the receiving order to be rescinded. This will ensure that regard will be paid not simply to the amount of the debtor's assets but to the broader question of all other circumstances of the case—to which I have referred earlier.

I shall therefore be moving an amendment to this effect in Committee.

Subject to this last mentioned matter, Sir, I support the motion.

FINANCIAL SECRETARY: Sir, I welcome the amendment proposed by Mr. WONG Po-yan and am grateful to him for his cogent remarks in support of this measure, and to Members of the Legislative Council *ad hoc* group who studied this Bill.

The amendment serves to put beyond any doubt that the court, in deciding to rescind a receiving order or to annul an adjudication of bankruptcy under the proposed new section 33(1A), should take into consideration *all* the circumstances surrounding the case. This is consistent with the need to meet the broader objectives of bankruptcy law, which I mentioned when moving the Second Reading of the Bill earlier this month.

Sir, I therefore support the proposed amendment.

*Question put and agreed to.*

Bill read the Second time.

*Bill committed to a Committee of the whole Council pursuant to Standing Order 43(1).*

## **THEFT (AMENDMENT) BILL 1986**

### **Resumption of debate on Second Reading (12 March 1986)**

MR. PETER C. WONG: Sir, the purpose of this Bill is to remove certain loopholes in the Theft Ordinance. The main thrust of the proposed amendments is to tighten the law against fraudulently obtaining credit facilities from financial institutions, i.e. theft in the commercial sector.

The Legislative Council group examined the Bill in great detail. One of its functions is to ensure that the Bill accurately reflects the object of the proposed changes.

The key clause in the Bill was found to have cast the net too wide. Accordingly, amendments will be moved at the Committee stage by my colleague, Miss TAM. The clause as amended will only apply to financial institutions as was the intention.

Sir, I support the motion.

ATTORNEY GENERAL: Sir, the Administration supports the amendments moved by Miss Maria TAM.

I would like to thank the *ad hoc* group of UMELCO whose careful consideration of the Bill has resulted in these useful amendments.

The new clauses 2 and 3 of the Theft (Amendment) Bill proposed by Miss Maria TAM do not alter the purpose of the proposals contained in the original Bill which, as stated in my speech on 12 March 1986 to this Council, are to bring the fraudulent activity of obtaining credit by deception clearly within the ambit of the criminal law.

The amendment to section 18 (clause 2) and the new section 18D (clause 3) will now clearly identify those bodies on which his kind of fraud will ordinarily be perpetrated, that is to say, banks and deposit-taking companies, and subsidiaries of banks or deposit-taking companies whose principal business is the provision of credit.

The proposed amendments define 'bank' and 'deposit-taking company' by cross-reference to the new Banking Ordinance 1986. That Ordinance has not yet commenced. Hence Miss Maria TAM'S proposed amendment to clause 1 to tie the commencement of this Bill to that Ordinance. I understand that the delay in the commencement of the Bill will be quite short, as the Banking Ordinance 1986 is expected to be commenced in early September.

With these amendments, I remain sure that this Bill will provide valuable additional sanctions against forms of fraudulent activity that are a recurring threat to the integrity of ordinary business life in Hong Kong.

*Question put and agreed to.*

Bill read the Second time.

*Bill committed to a Committee of the whole Council pursuant to Standing Order 43(1).*

## **EASTERN HARBOUR CROSSING BILL 1986**

### **Resumption of debate on Second Reading (2 July 1986)**

MR. CHEN: Sir, this Bill is the fruit of many months of complex negotiation between the Government and the new Hong Kong Tunnel Consortium. It represents a formal arrangement by which the people of Hong Kong are provided with a useful new transport facility at virtually no cost to the public purse. There is no question of the size and importance of this project: the existing road and rail links between Hong Kong and Kowloon are heavily congested; the roads leading to the existing tunnel, particularly on Hong Kong side, are rarely free of queues and jams. The existing tunnel itself is so well used throughout the day that there is now a variation of only 6.5 per cent between rush-hour traffic and non rush-hour traffic. The new tunnel will relieve these problems and provide a more balanced arrangement of traffic between Hong Kong and Kowloon. It will also encourage new areas of development in Cha Kwo Ling and, with the completion of the Tate's Cairn Tunnel to Sha Tin in 1992, will draw even more vehicles away from the crowded roads of central Kowloon.

The financial arrangements for the construction and operation of the tunnel are positive and promising: they show confidence both in the enterprise itself and in Hong Kong. I believe the financing of the project represents the largest foreign investment in any on-going civil engineering project in Hong Kong at present. The equity/cost ratio is reasonably high and the project does not rely on land or property development for financing. The toll for private cars and taxis when the tunnel opens in 1989 will only be \$10 and there will be no passage tax for at least five years.

Sir, the project is a tribute to the initiative and ingenuity of both the Government and private enterprise. We have recently seen a similar venture, in which an important public facility is provided by non-governmental organisations, in the Hong Kong Exhibition Centre. I hope we shall see many more ventures of this kind.

With these remarks I support the Bill.

MR. CHAM: Sir, free enterprise is the life-blood of Hong Kong. The Government exists to provide for the essential infrastructure for the smooth functioning of our economy. In this context, the construction of the Eastern Harbour Crossing under proposal is an effort to provide an efficient transport system connecting between Hong Kong and Kowloon. The potential for economic development embodied in this project is substantial for both the Peninsula and the Island—not to mention the obvious pay-off in terms of reduced traffic congestion on our road system.

The project envisages building a four-lane motor drive and a railroad tunnel between Cha Kwo Ling and Tai Koo Shing. The onus of its finance, construction and operation is to remain in the private sector.

Sir, the significance of this Bill lies not only in the provision of a new item of public facility to lubricate the functioning of our economy, but also in the illustrated efficacy of mobilising free enterprise resources to help finance and construct public projects. It is a project which highlights the contribution of free enterprises to our economy. Indeed, if delays in the project in sight result in escalating costs and fall-behind of commissioning dates, both events will certainly be detrimental to the company's interest and in turn, to the public interest. Therefore, it is in the interest of the management of this project to strive to achieve efficiency, to overcome delays as well as to minimise bureaucratic red tape. This can be commended as an example of how the Government can make free enterprise work for the benefit of Hong Kong as a whole. I look forward to congratulating the Administration on its commitment to more construction projects of this nature.

Sir, I support the motion.

MR. CHEONG-LEEN: Sir, the Eastern Harbour Crossing Bill 1986 is a model of vital and essential detail in legal drafting which could fruitfully be studied by all those who wish to embark on joint venture investments or other forms of investment in China. The Bill seeks to reduce possible points of conflict or misinterpretation of the unforeseeable to the very minimum. It has made me wonder whether this form of privatisation could not equally be regarded as another form of capitalistic-style socialism at its pragmatic best.

This Eastern Harbour Crossing which will comprise a four-lane road tunnel, and a rail tunnel as well, will be financed, constructed and operated virtually by the private sector. The design, construction and operating standards will be among the highest in the world. The target toll for 1989 when the road tunnel is near completion is expected to be \$10 for a private car or taxi. Other target tolls are also given in the schedule. Furthermore, in accordance with clause 55 of the Bill, the Tolls Schedule can only be varied by agreement with the Governor in Council, subject to arbitration procedures if found necessary. This clause will ensure that the public interests are adequately protected.

The consortium which includes Chinese, Japanese, local and other interests clearly indicates the international interest in this long-term project.

Under the terms of the contract with the international consortium, the length of the road franchise would be 30 years from the start of construction, and the operating agreement by the MTRC will be for 18.5 years after operation commences. These two franchises go well beyond 1997 and augur well for future long-term investments in Hong Kong.

I expect that Government will carefully enforce and monitor all the terms and conditions laid down in the Bill. Concurrently, this will lead to new opportunities

for urban expansion at both ends of the Eastern Harbour Crossing I would urge Government to ensure that such development will improve the standard of urban living environment, rather than cause negative environmental impact due to short-sighted planning standards and short-term benefits arising from cutting the wrong corners.

Sir, I support the motion.

MR. POON CHI-FAI (in Cantonese): Sir, although I understand that according to Standing Orders, I do not have to declare my interest, I would like to put on record that I am an employee of the Kowloon Motor Bus Co.

Judging from the congestion of the Cross Harbour Tunnel at present and the development projects of Junk Bay, East Kowloon and the Eastern District on Hong Kong Island, the construction of a second cross harbour tunnel is most needed and will be welcomed by the public. By taking up such a large project. Government has shown its confidence in the territory.

The Eastern Harbour Tunnel will link up Cha Kwo Ling and Quarry Bay. Upon completion, it would provide a quick and direct access for traffic in the eastern part of Hong Kong and would also change the east end of urban Kowloon into an interchange for traffic between Hong Kong and Kowloon. Apart from speeding up the development of the eastern part of Hong Kong, it would also bring prosperity to the district.

However, the present road systems in Cha Kwo Ling and Kwun Tong would not suffice to meet the traffic demand after the completion of the Eastern Harbour Tunnel. Therefore, I fervently hope that the authorities concerned would conduct a study of the design of a composite interchange road network in East Kowloon as soon as possible and to construct an elevated road at the waterfront of Kwun Tong to meet the demand of the future bulk of road traffic after the new tunnel is put to use. Moreover, the Administration should also make arrangements for public vehicles to use the Eastern Harbour Tunnel so as to provide better services to the public and to make full use of the new tunnel.

Finally, I would like to take this opportunity to thank the 200 odd families which are affected by the project and have to move from the home in which they have lived for over 20 years to make way for community development and the interest of the public. This spirit of putting others' interest before one's own deserves the admiration of us all.

Sir, with these remarks, I support the motion.

SECRETARY FOR TRANSPORT: Sir, I am grateful for the support of Mr. CHEN Shou-lum, Mr. Kim CHAM, Mr. Hilton CHEONG-LEEN and Mr. POON Chi-fai for the Bill.

From the time that serious consideration began to be given to the Eastern Harbour Crossing it was clearly understood that the project could not be

allowed to add to levels of congestion in East Kowloon. Were that to happen it would, in large measure, defeat the object of the exercise. Accordingly, in conjunction with this project and in association with New Hong Kong Tunnel Co. Ltd. a joint traffic study is presently underway to determine the traffic implications of the Eastern Harbour Crossing for East Kowloon. It is the intention that on the basis of the study road improvements will be planned and constructed including, if necessary, a Kwun Tong Bypass so that not only is congestion in the area not increased but an overall improvement in traffic flows is achieved.

The Eastern Harbour Crossing will be accessible to buses and the franchised bus companies are now considering Eastern Harbour Crossing routes in connection with their five-year development plans.

*Question put and agreed to.*

Bill read the Second time.

*Bill committed to a Committee of the whole Council pursuant to Standing Order 43(1).*

### **Committee stage of Bills**

Council went into Committee

### **BANKRUPTCY (AMENDMENT) BILL 1986**

Clauses 1 to 3 and 5 were agreed to.

Clause 4

MR. WONG PO-YAN: I move that clause 4 be amended as set out in the paper circulated to Members.

*Proposed amendment*

#### **Clause 4**

That clause 4(b) be amended in the new subsection (1A), by inserting after '15 per cent' the following—

' , and that it is desirable in all the circumstances of the case for such order to be made'.

The amendment was agreed to.

Clause 4, as amended, was agreed to.

## THEFT (AMENDMENT) BILL 1986

Clauses 1 to 3

MISS TAM: I move that clauses 1 to 3 be amended as set out in the paper circulated to Members.

### *Proposed amendments*

#### **Clause 1**

That clause 1 be amended, by inserting after '1986' the following—

(27 of 1986.) 'and shall come into operation on the commencement of Part III of the Banking Ordinance 1986'.

#### **Clause 2**

That clause 2 be amended, by deleting clause 2 and substituting the following—

'Amendment of section 18. **2.** Section 18 of the principal Ordinance is amended—

(Cap. 210.) (a) in subsection (2), by deleting paragraph (b) and substituting the following—

"(a) he is granted by a bank or deposit-taking company, or any subsidiary thereof the principal business of which is the provision of credit—

- (i) a credit facility or credit arrangement;
- (ii) an improvement to, or extension of, the terms of a credit facility or credit arrangement; or
- (iii) a credit to, or a set off against, an account, whether any such credit facility, credit arrangement or account—
  - (A) is in his name or the name of another person; or
  - (B) is legally enforceable or not;

(b) he is allowed to borrow by way of overdraft, or to take out any policy of insurance or annuity contract, or obtains an improvement on the terms on which he is allowed to do so, whether any such overdraft, policy of insurance or annuity contract—

- (i) is in his name or the name of another person; or
- (ii) is legally enforceable or not; or"; and



(b) by deleting subsection (3) and substituting the following—

"(3) For the purposes of this section—

"bank" means—

(a) a bank within the meaning of section 2(1) of the Banking Ordinance 1986; and  
(27 of 1986.)

(b) a bank—

(i) incorporated by or under the law or other authority in any place outside Hong Kong, and in this respect "incorporated" includes established; and

(ii) which is not licensed under section 16 of the Banking Ordinance 1986;  
(27 of 1986.)

"deception" has the same meaning as in section 17;

"deposit-taking company" has the same meaning as in section 2(1) of the Banking Ordinance 1986;  
(27 of 1986.)

(Cap. 32.) "subsidiary" has the same meaning as in the Companies Ordinance."!

### Clause 3

That clause 3 be amended, by deleting clause 3 and substituting the following—

'Addition of  
new section  
18D

3. The principal Ordinance is amended by adding, after section 18C, the following—

"Procuring  
false entry in  
certain records.

**18D.** (1) Any person who dishonestly, with a view to gain for himself or another or with intent to cause loss to another, by any deception (whether or not such deception was the sole or main inducement) procures the making, omission, altering, abstracting, concealing or destruction of an entry in a record of a bank or deposit-taking company, or any subsidiary thereof the principal business of which is the provision of credit, shall be guilty of an offence and shall be liable on conviction upon indictment to imprisonment for 10 years.

(2) For the purposes of this section—

"bank" means—

(a) a bank within the meaning of section 2(1) of the Banking Ordinance 1986; and  
(27 of 1986.)

(b) a bank—

(i) incorporated by or under the law or other authority in any place outside Hong Kong, and in this respect "incorporated" includes established; and

(27 of 1986.) (ii) which is not licensed under section 16 of the Banking Ordinance 1986;

"deception" has the same meaning as in section 17;

(27 of 1986.) "deposit-taking company" has the same meaning as in section 2(1) of the Banking Ordinance 1986;

"record" includes—

(a) any document or record used in the ordinary business of a bank or deposit-taking company, or any subsidiary thereof the principal business of which is the provision of credit; and

(b) any document or record so used which is kept otherwise than in a legible form and is capable of being reproduced in a legible form;

(Cap. 32.) "subsidiary" has the same meaning as in the Companies Ordinance."!

The amendments were agreed to.

Clauses 1 to 3, as amended, were agreed to.

Clauses 4 to 7 were agreed to.

### **EASTERN HARBOUR CROSSING BILL 1986**

Clauses 1 to 81 were agreed to.

The Schedule was agreed to.

Council then resumed.

### **Third Reading of Bills**

THE ATTORNEY GENERAL reported that the

EASTERN HARBOUR CROSSING BILL 1986

had passed through Committee without amendment and the

BANKRUPTCY (AMENDMENT) BILL 1986 and the

THEFT (AMENDMENT) BILL 1986

had passed through Committee with amendments, and moved the Third Reading of the Bills.

*Questions put on the Bills and agreed to.*

Bills read the Third time and passed.

4.05 p.m.

HIS EXCELLENCY THE PRESIDENT: At this point, Council might like a short break.

4.25 p.m.

HIS EXCELLENCY THE PRESIDENT: Council resumes.

### **Adjournment**

*Motion made. That this Council do now adjourn—*THE ATTORNEY GENERAL.

HIS EXCELLENCY THE PRESIDENT: Twenty-seven Members have given notice of their intention to speak. I do not think we can finish in half an hour, so I propose to exercise my discretion under Standing Orders 9(7) and 9(8) to allow Members such time as is necessary to complete their speeches, and such time as is then necessary for the Official Member to reply to those speeches, before putting the question on the adjournment. I will also see how we get on with the speeches and if necessary, have another short break at 6 o'clock.

### **The Hong Kong and Daya Bay Nuclear Power Project**

MISS TAM: Sir, Twenty-seven Members of this Council will speak today on this adjournment debate. We have agreed to limit each speech to not more than five minutes. We have not endeavoured to reach a consensus on any of the points raised today because up until last Friday we were still being briefed on the economic aspects of the future power supply in Hong Kong. Each Member will therefore speak according to his own perception of the issues before him. And I believe there will be further debates on the subject of Daya Bay.

The history of China's plan to build one of her three nuclear power plants at Daya Bay is well documented and I shall not repeat it. The real concern of the people of Hong Kong over the prospect of living only 30 to 50 km from a nuclear plant began to surface soon after the Chernobyl disaster, the dire consequences of which we are still reading from the newspapers in these days.

*The case for concern*

For nearly two months the people of Hong Kong have been questioning: is the Daya Bay plant safe? Can we really evacuate Hong Kong if it blows up like the Chernobyl plant? Can the engineers and experts of China really manage the plant safely and up to international standards once the French team is withdrawn? How can we possibly discount the factor of human error which makes the plant unsafe? And further more, what real advantage are we getting out of buying electricity from Daya Bay? Why can't we pay more per unit cost for our electricity and buy from a coal-fired plant from either China or Hong Kong? Is nuclear power really economical?

These questions are important and must be answered. The Daya Bay project had such a low profile in the years past that not many people in Hong Kong know or remember why the China Light and Power Co. Ltd. should be involved in it at all.

*The plus factors*

I trust that in the years leading up to and during the Sino-British negotiation on the future of Hong Kong, the fact that the Guangdong Nuclear Power Joint Venture Company is investing US\$400 million on this project helped to maintain the confidence of foreign investors in Hong Kong. The French and British, Japanese and American exporters of nuclear plant were all keen to see the project go ahead, and no doubt, so were their governments. The French plants are known to have a good track record of being safe. So let us not forget that in those difficult and uncertain years the Daya Bay site on the map was marked with a plus rather than a minus sign and for good reasons. There is, of course, also the need to diversify the source of fuel supply to Hong Kong because we are vulnerable to the cost of totally imported coal and oil. Also, if China has determined to import a nuclear plant near Hong Kong, China Light and Power Co. Ltd. should join in to ensure that a Hong Kong company may have a say in the control of the plant and on matters of safety. However, after Chernobyl, we are now looking at a changing picture, and need to reassess the situations before us.

*The UMELCO Public Utilities Panel*

In helping to find the answers to the questions asked by the Hong Kong people, the UMELCO Public Utilities Panel held four meetings between 27 June and 11 July 1986. Two of these meetings were briefing sessions given to us on the safety and technical aspects of the project by the Joint Venture Company

engineers. We also met with the representatives of the China Light and Power Co. Ltd. who explained to us why it is not considered economically attractive to build a new coal-fired plant in Hong Kong, the advantage of diversifying the source of energy fuel and the comparative advantages of using nuclear energy. We also met with Mr. Walter PATTERSON on 5 July 1986 and he reminded us of the dangers of nuclear accidents. In order to channel the highly technical and yet vital information on the safety aspects of Daya Bay we held an open meeting of the panel with the Joint Venture Company engineers on 4 July 1986 and today, we are officially publishing the questions and answers passed between the panel and the joint venture company, the panel and the Economic Services Branch (Annexes A, B and C), the list of contracts to be signed between the joint venture company and the French and other manufacturers and contractors (Annex D) so that the public may see that many of their questions had been raised and answered. Although this is only a small portion of our material. It would take me sometime to cover them and I urge those who are interested in the facts to read them. We have also received literature from Mr. PATTERSON through the courtesy of both the Friends of the Earth, and our contacts abroad and mainly through the courtesy of the hon. P. Y. WONG working in the field of nuclear power technology, and representations from concerned groups. We thank them for informing us of the pros and cons of the Nuclear Option. The literature on this subject has accumulated into a four inch bundle, and we shall identify the points (including Mr. PATTERSON'S) on which we need independent expert assessment when we meet with the Nuclear Regulatory Commission of the USA and the International Atomic Energy Agency in Vienna in August 1986. We shall look into the operation and maintenance requirements in similar plants and the risks associated with them; and the contingency plans necessary and feasible for densely populated metropolitan areas located within 50 km of such plants.

*The task of the Legislative Council*

Why, you may ask, should the panel spend so much time studying the issue? Surely the most fruitful way out is to go up to Beijing and tell the PRC Government that a million people, including primary school children mobilised after morning assemblies in Hong Kong, will sign their names in protest of this project and the plant must be scrapped.

I have no doubt that taking in this route there is political mileage to be made from here all the way to China. What is there to lose if the PRC Government ignores the wishes of the Hong Kong people? It only shows her up to be undemocratic and insincere. But if China should change her mind for whatever reason, then there is everything to be gained from speaking up for the Hong Kong people.

What then is the role of the Legislative Councillor in Hong Kong? Although I have not discussed the contents of the speeches today, I am sure that every one

of us will say that a great number of the people here are against the project going ahead, and that both the Hong Kong and PRC Governments must reconsider their positions under such circumstances.

However, we must also *advise the Hong Kong Government* what is the best option available to us that will best safeguard the interest of the Hong Kong people; or else we are no more contributory than pressure groups.

At present, I believe we have no consensus on what is the best option.

Some of us think that the nuclear plants in question are intrinsically safe but have serious doubts about management by a Chinese team of experts and engineers because this will be the first plant of its kind to be built in China. Some advocate that the Joint Venture Company and HKNIC should keep their existing contractual arrangements but turn Daya Bay into a coal-fired plant. Some of us believe that given a well structured programme of public and school education the people of Hong Kong may accept that nuclear energy is safe. Some of us believe that there is no significant advantage in using nuclear energy to generate electricity and it is therefore not worth taking the risk no matter how small it is. Some believe that, for good reasons, the plant should be scrapped altogether.

We must examine these options before coming to a majority decision on *which is really the best option*.

#### *The Nuclear Option*

Japan has gone through the trauma of a nuclear holocaust in *Nakasaki* and *Hiroshima* in 1945. Today, 30 per cent of her energy is generated from nuclear power and the Nakasone Government which won a landslide victory two weeks ago plans to raise the nuclear power supply to 45 per cent. Like Hong Kong, Japan is also vulnerable to the fluctuation of imported fuel prices.

In 1973 the OPEC countries decided to create a cartel in the provision of oil, and succeeded in bringing about the biggest redistribution of wealth the world has even known. The hon. Peter WALKER, the British Secretary of States for Energy spoke on the 20 June 1986, less than two months after the Chernobyl accident reaffirming Britain's commitment to developing nuclear power for peaceful use. He said 'The proven and probable reserves of the world's oil will run out sometime between the year 2040 and 2065, and the world's coal will run out somewhere between the year 2066 and 2076.' 'The 21st century is the century in which the known finite energy resources of the world are destined to run out.' 'Britain is planning to expand its nuclear power supply from 20 per cent to 25 per cent in the near future. At present 65 per cent of the energy supply in France is nuclear power; then 30 per cent for West Germany and still rising; the USA, Japan and the Pacific Basin are aiming at 40 per cent....'

Many of us who travel into China know that without a substantial and constant supply of energy, her modernisation will not get off the ground. On the

other hand, Hong Kong has to import all her fuel supplies and remains exposed to the eventually rising costs of fossil fuel. And when this happens the nuclear option for both Hong Kong and China cannot be ruled out forever.

*The information gap*

Has the free world fully harnessed nuclear energy for peaceful purposes? I had the privilege of speaking to Professor YANG Cheung-ning, a Nobel prize Laureate. He believed that nuclear energy is intrinsically safe. Many of the nuclear scientists from the universities in Hong Kong or visiting Hong Kong believe that nuclear power is intrinsically safe. But many of them are also aware that Hong Kong people are generally not ready to accept this so soon after Chernobyl. However, I hope that they will continue to debate on this issue. Whether or not we accept the risk of using nuclear power plants we can still benefit from listening to well informed debates on the subject matter, rather than living in doubts and anxiety. To me it is a pity that only the joint venture company engineers can speak on Daya Bay with authority. Government seems to have little access to expert opinion on this matter and the Harwell report on safety and contingency measures will take a few more months to complete. I hope that this knowledge gap be filled as soon as possible.

*The way ahead*

I am aware that the main construction contracts to be made between the Joint Venture Company and GEC and Framatone will be signed in August and September 1986. In my view the legislators of Hong Kong must be given time to find the best option. We need to verify the conflicting information put to us by the Joint Venture Company and the anti-nuclear groups. We must find out what contingency plans there are for those who live near to nuclear plants. We must find out if the safety standards proposed for Daya Bay are of the quality required. We are travelling to the USA, France and Vienna to test what we are being told here in Hong Kong. I know these trips are being attacked from the beginning as 'junket trips'. But unless we see this as a purely political issue, which I believe is a narrow way of looking at this problem, we must first verify the facts put before us and then make judgements on it, and if we should find the safety standards and contingency measures unsatisfactory, we shall say so and vice versa.

In the meantime, it will not be prudent for the Joint Venture Company to sign any contract on the construction of the Daya Bay plant when a great number of the people of Hong Kong are not ready to accept it. It will take time for us, as a community, to grasp the facts and make assessments of whether we can live with nuclear power so close to home. The sooner the people are asked to make a choice, the stronger the likelihood of a resounding 'No'. Many legitimate requests for information from Members of this Council are still unanswered, and I have listed them out in the appendices to this speech. The feasibility report remains out of reach. Professor C. K. POON's request for data is still outstanding and it is now mid-July.

I urge that no contract be signed before our delegations return from the trips abroad, and reported to the people of Hong Kong; and amongst our colleagues we shall seek a majority or unanimous view on this issue. I hope that the joint venture company appreciates that if our request is not met the Hong Kong Government may not be properly advised on this matter.

I trust that the message is clear.

ANNEX A

## VIEWS ON SAFETY OF DAYA BAY NUCLEAR PLANT PROJECT

### Answers by the Guangdong Nuclear Power Joint Venture Company to questions raised by UMELCO

*Question 1* PWRs are not as safe as the Government has claimed them to be. Only as recent as 1979, a melt-down occurred in a PWR on Three Mile Island, causing considerable panic. Also, according to the findings of the Sizewell Inquiry conducted in the United Kingdom two years ago, PWRs have more than 80 design defects and most of them are considered to be serious. These defects have since not yet been rectified.

*Answer* The Three Mile Island incident, whilst being serious in a number of aspects, resulted in insignificant risk and effect on the surrounding population. The main factor which prevented environmental impact was the containment of the nuclear plant. Since the Three Mile Island incident improvements have been made to overcome concerns that arose, and these improvements have been incorporated in the French programme and in the Daya Bay design.

The report on the Sizewell enquiry has not yet been published and so the outcome of all the issues raised there has not yet been stated. We are aware that approximately 80 points were raised by the United Kingdom Nuclear Installations Inspectorate (NII) which is the United Kingdom licensing authority. However, we believe these are not 'defects' and comment further as follows:

- (1) The PWR design proposed for the United Kingdom is not a replication of an existing plant and is not derived from a long series of standardised plants as is the case for Daya Bay. On the contrary, it incorporates features developed specifically by the United Kingdom utility (CEGB). It is also the first PWR that will be licensed by the NII.



- (2) Our understanding is that the majority of the 80 points raised by the NII were in the nature of requests for more information and substantiation and many were not major. We understand that most were satisfactorily answered without a need for any changes. They should not therefore be thought of as 'defects'. We understand six points were considered to be more significant, but even in these cases we are only aware of one point where a modification is likely. That one point apparently concerned an improvement of fire protection standards for cabling. Such an improvement has already been made for the Daya Bay project.

*Question 2* The protective shield of the Daya Bay plant may not be able to resist the enormous pressure and heat from the core of the plant in the event of a melt-down.

*Answer* The Emergency Core Cooling Systems have been developed to prevent a core melt-down. They operate automatically and are engineered to very high standards of reliability, which includes complete duplication of all functions (i.e. 100 per cent back up).

The containment is designed to withstand a sudden complete break in the main nuclear system whereby the normal flow of pressurised water through the reactor core is lost (referred to as a 'loss of coolant accident' or LOCA). This is an extremely unlikely event, bearing in mind that the walls of the pipework carrying the pressurised water are 7 cm thick. In the event of a loss of coolant accident the emergency core cooling systems operate to prevent overheating of the core, and the discharge of hot pressurised water from wherever the break has occurred will be held inside the containment. Sprays of cold water operate automatically inside the containment to condense some of the steam that forms from the escaping pressurised water.

The containment is designed and tested to withstand a pressure of five bars (five times atmospheric pressure). This is the highest pressure that could occur in the event of the most serious loss of coolant accident occurring when the reactor was operating at full load.

The complete loss of coolant accident is the worst accident considered to be possible and is the design basis for the containment and safety systems. The nuclear plant design has to be able to prevent any radioactive release to the environ-

ment in the event of such an incident. Further analyses are, however, performed on more serious incidents including a melt-down. The criterion for French plant is that none of these more serious incidents must lead to unacceptable consequences. In France, consequences are deemed unacceptable if they require evacuation more than 10 km from the power station. All provisions needed to achieve this level of safety will be incorporated at Daya Bay.

In practice the analyses indicate a margin of safety, i.e. serious incidents such as melt-down probably would not require evacuation as far away as 10 km. These conclusions are supported from other sources:

- (1) Studies have been underway for several years, particularly in the USA, on the effects of severe accidents in nuclear plants. These studies are concluding that incidents such as melt-down would not lead to the extreme consequences that had previously been suggested. A major factor in this respect is the large body of water that would form at the base of the containment in the event of a loss of coolant accident.
- (2) In the Three Mile Island incident a partial melt-down did occur. However, the pressure inside the containment did not rise above the level for which the containment was designed. It can also be pointed out that the radioactive release inside the containment was far below the levels predicted by previous calculations.

*Question 3* Have any serious accidents ever happened with the nuclear plant in France, whose contractor is responsible for building the nuclear plant in Daya Bay? If the answer is in the affirmative, then what is the cause of the accidents and the casualty rate? Are there any contingency plans in France for evacuation in case of accidents?

*Answer* There have been no serious accidents on nuclear plants in France. In the case of the French PWR series of plants, from which Daya Bay is derived, there have been no incidents of any radioactive release even *inside* the containments. This represents a very high safety record.

There are contingency plans in France for the event of an incident at a nuclear station. They are established on a case by case basis according to local conditions at each location. The contingency plans do include the possibility of evacuation of

areas in the immediate vicinity of the power station sites but, as stated previously, there are no circumstances where evacuation beyond 10 km from the site is envisaged.

*Question 4* According to a lecturer (Mr. CHOW Cheun-ho) in the Department of Geography, Baptist College, Daya Bay is located in an earthquake-prone zone. The Daya Bay nuclear plant is therefore more vulnerable to damage caused by earthquakes.

*Answer* The seismicity of the Daya Bay area has been studied extensively both by PRC Experts and, independently by French and British experts. Taking account of all available information including historical earthquake records, a design basis has been determined for the plant. This design basis means that the plant can be shut down safely, without radioactive releases, in the event of an earthquake causing a ground acceleration of 0.2 g. This figure is typical of other plants and all experts agreed it allows for the most severe earthquake that could be envisaged for the Daya Bay site. Some experts considered it to be very conservative and that earthquakes could never reach this intensity.

Consequently, Daya Bay cannot reasonably be described as being in an 'earthquake-prone' area and the plant cannot be described as being 'vulnerable' to earthquake damage.

*Question 5* It is understood that no insurance company has been willing to offer accident or third-party insurance to cover mishaps in nuclear plants: this could serve as evidence of the extremely dangerous nature of nuclear plants.

*Answer* Protection against liability for nuclear-related risks will be provided for Daya Bay in the same way as virtually all countries with nuclear power stations. According to this practice, the ultimate protection takes the form of a Government-supported indemnity rather than insurance. Such provisions have already been made by the PRC Government.

*Question 6* The nuclear industry in China is still at a very primitive stage and it is therefore naive to assume that high safety standards could be maintained for the Daya Bay project.

*Answer* China has established nuclear technology for military applications. However, the fact that Daya Bay will be the first commercial nuclear generating plant in China has been perhaps the single most significant factor in determining the means of proceeding. The strategy developed for managing the

project and for contracting is based on extensive use of international standards and experience and participation by internationally recognised contractors and consultants at all stages. In particular:

- (1) The Daya Bay nuclear plan design is based on an established series of standardised plants in France. There are a total of 59 units of 900MW and above, including exported plants, in this series prior to Daya Bay. (This includes 41 units of the 900MW class of which 37 are in operation.)
- (2) The standards to be used for the design, manufacture and construction of the nuclear equipment are those applicable in France, together with certain relevant international standards. The equipment will be designed and manufactured in France by the French contractor Framatome, who will also supervise its erection on site and participate in its commissioning and start-up.
- (3) Contractors from France and other countries with experience on other nuclear projects will take a leading role in the civil works construction on site.
- (4) The French utility Electricite de France (EdF) will take a leading role in the technical management of the project, including review of the work of other contractors both in Europe and in the PRC, the engineering of peripheral equipment and the design of the civil works for the nuclear equipment.
- (5) An independent foreign Quality Assurance Consultant will be appointed.
- (6) There will be intensive training in France for staff involved in the operation and maintenance of the station. This will include "hands-on" experience on French stations and formal qualification issued by EdF for staff who reach the required standards in training.

*Question 7* What consideration is being given to arrangements for disposing of the nuclear waste products of the plant and where will the disposal take place?

*Answer* The solid waste produced during operation is considered in two categories as follows:

- (1) *High level waste*  
The high level waste arises in small quantities inside the nuclear fuel elements. When fuel is removed from the reactor it will firstly be stored in controlled conditions

on site to allow time for some decay of the most active fission products. It will later be removed from site in heavily shielded containers. There are then two alternatives:

- (i) Either, the fuel is stored long term at a centralised facility, or
- (ii) The fuel is reprocessed, during which the small proportion of active waste is removed and converted to a stable form of glass or ceramic. In this form the waste is suitable for long-term disposal underground in geologically stable rock formations.

PRC stated policy is to develop both of these alternatives.

(2) *Intermediate and low level wastes*

This covers a range of materials from chemicals and during the operation of the reactor down to overalls and shoes of operators that may have picked up a trace of activity. There will be the same type of plant at Daya Bay as on French Stations and elsewhere which firstly feeds the waste into a concrete mix and sets the mix into drums. A further layer of concrete is then added around the outside as a shield so that the blocks can be handled safely.

These blocks are then removed from site to controlled underground disposal locations.

The locations for nuclear waste disposal are being treated as a national PRC issue and are not yet selected. An investigation programme is underway however.

*Question 8* Would it be possible to find an alternative site for Daya Bay in China further away from Hong Kong and other populous areas?

*Answer* The Daya Bay site has been selected after consideration of the following major criteria:

- (1) Compliance with internationally accepted standards for remoteness from population centres, including Hong Kong, on the basis that evacuation plans for Hong Kong are impracticable and must not be necessary.
- (2) The need for acceptable rock foundation conditions and an acceptable distance from any active geological faults.

- (3) The need for large volumes of seawater to be available continuously for cooling purposes, without excessive silt or pollution, and the need for sea access of adequate draft for shipments to the site.
- (4) The need for transmission grid connections to both the Guangdong and Hong Kong electricity distribution systems, to enable reliable and stable operation and transfer of power.

A suitable site further away than Daya Bay has not been identified.

*Question 9* Since many of the major nuclear accidents in the past have reportedly been the result of human error (Chalk River, Canada 1952, Idaho 1985; Minnesota 1971, Brown's Ferry, Alabama 1975; Three Mile Island; Ohio 1985) what measures will be taken to ensure that mistakes, misunderstandings, misreadings, miscalculations and false assumptions will be avoided or minimised in the Daya Bay Plant?

*Answers* The need for close attention to the qualification and training of operators and the management of the power station organisation has been highlighted by incidents elsewhere. There is, however, extensive protection in depth in the nuclear equipment which is there to maintain safe conditions both in the event of human error and in the event of equipment malfunctions. In plants of the type to be used at Daya Bay this protection has been proven to be effective.

In reaching this standard of safety, there have been significant improvements resulting from incidents elsewhere, particularly the Three Mile Island incident. The improvements include:

- (1) Improvement in the so-called 'man-machine' interface. For example, the layout of the control room and the presentation of information has been modified such that the operator is better able to judge the status of the plant and action to be taken.
- (2) Operating procedures for normal operation, incidents and accidents have been extensively revised and improved.
- (3) Very much greater importance is now attached to operator training and qualification (refer to earlier comments on 2(i)). In addition it is increasingly the practice to provide a simulator on site for continued training and this will be done at Daya Bay.

*Question 10* What assurances are there that unforeseen political changes, a change in the allocation of financial resources, or corruption among officials in China will not hinder the construction of the plant or cause its safety standards to be lowered?

*Answer* The PRC has given a commitment from the highest level that safety will take first priority on the Daya Bay project.

As has already been stated, there is extensive international participation in the project with several layers of supervision and checks. This represents a higher level of supervision than is normal, say on domestic French projects, and is being provided to ensure all contractors comply with the necessary standards.

*Question 11* Has any consideration been given to building the latest design of nuclear reactor—known as an inherently safe reactor, which has no risk of a melt-down, at Daya Bay instead of a PWR reactor?

*Answer* The so called 'inherently safe' reactor is so far only a concept which exists on paper. It has never been built and the detailed design work has not yet been undertaken. We are not aware of any firm plans to proceed with this concept. For reasons stated previously, we would not want to pioneer a prototype design at Daya Bay. On the contrary, we have opted for an extremely well proven design with a history of safe operating experience.

*Question 12* Will there be monitoring of the Daya Bay Plant within China close to the plant in order to detect high levels of radiation well before they reach Hong Kong, and, if so, what communication will there be between the Chinese and Hong Kong is alerted before the radiation reaches Hong Kong?

*Answer* There will be monitoring of radiation levels both within the power station site and in the vicinity outside. The monitoring equipment is extremely sensitive and can detect small changes in background radiation.

Since, on average, 70 *per cent* of the power from Daya Bay will be fed to Hong Kong there will be close operational communications between the power station and the Hong Kong system. In addition, according to the terms of the Joint Venture Contract, the head of the operations department will be nominated by HK NIC. Consequently, the status of the plant will be known at all times in Hong Kong, both during normal operation and in any abnormal situations.

Further lines of communication are for Government to consider.

*Question 13* In view of the declining price of oil and the continuing cheapness of coal, are the economic considerations that led the Government to support the Daya Bay project in 1983 still valid? What, according to 1986 calculations, will be the financial benefits to the Hong Kong consumers of obtaining electricity from the Daya Bay Plant in the 1990s instead of obtaining it from conventional oil or coal-fired plants?

*Answers* Detailed economic studies for the Daya Bay Power Project have been carried out many times since its inception in 1980. The most significant economic study was conducted by the Government Consultants, Lazard Brothers, in 1984. In this study, various sensitivity scenarios were considered, including variations in the prices of fossil fuels. It is believed that Government were satisfied about the economics of the project as detailed in the report, including considerations of fossil fuel price variations, before they approved the go-ahead of the project.

The recent softening in oil and coal prices is considered to be temporary. Under the present fossil fuel prices, development of new mines will be greatly affected, which in turn will push the prices up eventually. On the other hand, the nuclear power station will be able to benefit from the low interest rates currently prevailing. The present export credit interest rate for China is 8.8 *per cent* p.a. which is lower than the original planning figure of 9.5 *per cent* p.a. It is probable that the interest rate will reduce further later this year. The present overall situation is that despite the softening of the prices of fossil fuels, nuclear generation is still likely to be cheaper than fossil-fired generation in the long run.

It should be pointed out that in order to provide additional protection to consumers in Hong Kong, an article was negotiated in the Joint Venture Contracts which states that electricity to be purchased from the Guangdong Nuclear Investment Company under the Electricity Resale Contract will be limited to no higher than the cost of coal-fired electricity for the first six years of operation of the nuclear power station. The calculation of cost of coal-fired electricity is defined in a formula specified in the Joint Venture Contracts which were approved by the Government.

*Question 14* What plans for the construction of new conventional power stations in Hong Kong by CLP have been cancelled as a result of the decision to build the Daya Bay Plant? What would their



capacity have been and for how long would they have been adequate to serve Hong Kong's needs? If the Daya Bay project is delayed or cancelled will existing power stations in Hong Kong be adequate to serve Hong Kong's needs in the 1990s?

*Answer* The detailed generation development plans have previously been submitted to Government. In the study carried out by Lazard Brothers, another consultants Burns & Roe were employed by Government to consider the technical aspects of the nuclear power project, including its effect to the generation development plans in Hong Kong.

Castle Peak Power Station will be completed by 1990, and without additional plant being added to the system thereafter, there will be insufficient generation capacity to meet the consumers demand in the 1990s, resulting in blackouts and brownouts which will be detrimental to the economy of Hong Kong. The purchase of power from the nuclear power station will be able to meet the electricity demand growth of Hong Kong consumers for the period up to 1995.

If the Daya Bay project is delayed or cancelled, the existing power stations in Hong Kong will not be adequate to serve Hong Kong's need in the 1990s. A new coal-fired power station will have to be built for commissioning in the early 1990s.

A coal-fired power station having a capacity equivalent to the nuclear power purchase would cost approximately HK\$17 billion, which would have to be found if this route were taken.

*25 June, 1986*

#### ANNEX B

*Comments by the Government on the questions raised by the Committee of Concern for Nuclear Energy and the UMELCO Members on the Daya Bay Nuclear Power Plant*

*Question 1* Since the cause of the Chernobyl incident has not yet been fully established, it is premature for Government to accept the view of the experts of the Daya Bay project that the Soviet incident was caused by the use of graphite.

*Answer* Pending a full report, if there is going to be one, on the Chernobyl incident, the Government has not ventured any suggestion as to the cause of the incident. What has been established and accepted by the Government is that the reactors used at the Chernobyl plant are the graphite

moderated RBMK type and are entirely different in design from the pressurised water reactors (PWRs) to be installed at Daya Bay, and that the PWRs will be of a higher safety standard and more technologically advanced than the RBMK. The Government has asked the consultants (United Kingdom Atomic Energy Authority at Harwell) to take into account any lessons which may be learnt from the Chernobyl incident in the development of accident probability assessment and outline contingency plan.

*Questions 2(a)* The Government reportedly commissioned the United Kingdom Atomic Energy Authority last year to conduct five studies on the Daya Bay project. The first study is of the feasibility of the project; the second of the possible accidents which may occur and the effects on Hong Kong; and the third of the emergency measures which have to be taken in case of such accidents. It is irresponsible of the Government to have supported the project even before the second and the third studies are completed.

*2(b)* Before Executive Council decided on the project in January 1985, did Executive Council Members have the chance to consider any reports on the safety of the project?

*Answer* As stated by the Financial Secretary in the Legislative Council on 7 May, the Executive Council was fully informed of and consulted on all stages of development in the negotiations between China Light and Power (CLP) and China. In January 1985, the Executive Council advised that the Government should inform the Hong Kong Nuclear Investment Company (HKNIC) and CLP that the Government had no objection to their entering contractual arrangements prepared for the formation of the Joint Venture Company, and purchase, initially by HKNIC and finally by CLP, of electricity from the project. An important consideration taken into account by the Executive Council was of course the safety aspect of the proposed nuclear power plant in Daya Bay. In this connection, the Council noted that the design of the Daya Bay Station will be identical to that of Units 5 and 6 of the Gravelines Nuclear Power Station in France and that it would adopt proven French technology. It was also noted that a National Nuclear Safety Authority directly responsible to the State Council, had been established by China and it would be assisted by the French Central Service for the Safety of Nuclear Installations which would be involved in both the licensing procedures for the Daya Bay plant and the setting up of a Chinese nuclear inspectorate. The inspectorate

would carry out surveillance of nuclear installations and would be responsible for ensuring that nuclear plants operate in compliance with Chinese safety regulations which would reflect nuclear safety standards applicable in France and adopted by the International Atomic Energy Agency and the International Commission on Radiological Protection.

It should be pointed out that the feasibility study of the project was compiled by China Light and Power Co. Ltd. and the Guangdong Power Co. in 1981, and it is *not* within the terms of reference of the Harwell consultancy study commissioned by the Hong Kong Government. What the Government has asked the Harwell consultants to do is to conduct five studies which are to provide technical evaluation of the radiation monitoring programme; to produce an assessment study of the probability of different accidents at the nuclear power station and the consequences for Hong Kong; to develop the design of an outline contingency plan for Hong Kong; to provide initial training for selected Government officers and to advise on an effective public education programme on nuclear related matters. The consultancy studies were intended to enable the Government to provide public reassurance and to take effective action in the unlikely event of an accident. The purpose of these studies is to provide the Government with an independent and expert evaluation of the environmental and safety impacts of the plant on Hong Kong.

*Question 3* Presumably China has already completed studies on the environmental impact of the Daya Bay Plant. Did the Hong Kong Government consider the environmental impact reports compiled by the Chinese authorities before making the decision on the Daya Bay project?

*Answer* The present site at Daya Bay was chosen by the Chinese Authorities on the basis of the feasibility study mentioned above which took into account the general topographical and meteorological factors covering the surrounding areas including that of Hong Kong. The Guangdong Nuclear Power Joint Venture Company (GNPJVC) is now conducting a full environmental impact report and an initial safety analysis report in relation to the Daya Bay project as a first stage of the licencing procedure. These reports will cover the implications for Hong Kong. A GNPJVC delegation visited Hong Kong in May this year with a view to collecting data for their studies. The Hong Kong Government is assisting GNPJVC in obtaining the necessary information.

*Question 4* Will the Government consider asking the contractor, Electricite de France (EdF), to arrange an independent inspection before the PWRs are put into operation?

*Answer* As stated by the Government, the responsibility for designing, constructing and operating the Daya Bay nuclear plant rests with the GNPJVC. The Hong Kong Government is therefore not in a position to ask the French National Utility Electricite de France to conduct an inspection before the PWRs are put into operation.

*Question 5* In view of the serious implications of the project on the well-being of the Hong Kong people, the latter should have been properly consulted before the project was given the support of the Hong Kong Government.

*Answer* As stated in the answers to Questions 2 (a) and (b), the Executive Council have been consulted on the project. The Government have, in addition, issued numerous public statements and press releases on this project. The public have been made aware of the developments and their views, expressed through various channels, had already taken into account by the Government before it raised no objection in January 1985 to HKNIC to enter into contractual arrangements with their Chinese counterpart to form the GNPJVC.

*Question 6* Is it intended that environmental matters relating to the Daya Bay Plant will be put to the Environmental Protectional Advisory Committee for advice? What are the reasons for putting the monitoring of radioactivity in the charge of the Royal Observatory rather than the environmental protection? What role does the Medical and Health Department have in the monitoring?

*Answer* The Royal Observatory is charged with the responsibility of radiation monitoring because it is best equipped within the Government to carry out the job. Other departments do contribute input to the monitoring process. The Medical and Health Services Department, for example, advise on the health impacts of radiation. The Environmental Protection Department, on the other hand, provide input on broad environmental issues. A working group with representatives from the Environmental Protection Department, the Royal Observatory, the Medical and Health Services Department, the Electrical and Mechanical Services Department and Security Branch,

co-ordinated by the Economic Services Branch, is in place to consider the safety and environmental issues. The present arrangement is considered effective in co-ordinating the various activities within the Government.

Economic Services Branch  
Government Secretariat  
*25 June 1986*

ANNEX C

**Written requests for information put to the Hong Kong Nuclear Investment Co. by UMELCO on 7 July 1986**

On behalf of Members of UMELCO, the UMELCO Office wrote to the Hong Kong Nuclear Investment Co. on 7 July 1986 seeking the following information:

1. Mr. Walter PATTERSON has said that in the event of a melt-down in a PWR all the melting core material would collect at the bottom of the pressure vessel and burn its way through the vessel and through the concrete underneath and eventually into the ground below. Radiation would then escape through craters formed by the melted core material in the ground surrounding the plant. The JVC engineers are requested to comment on this and to provide the detailed calculations supporting their comments.
2. In the event of a loss of coolant in the primary circuit of a PWR cold water would be injected into the reactor core. The JVC engineers are requested to comment on whether the containment would be able to withstand the thermal shock caused by such an injection and to provide the detailed calculations supporting their comments.
3. The data behind the JVC engineers' statement that in the event of a worst-case hydrogen explosion in a PWR the outer containment would remain intact.
4. Comments from the JVC engineers on whether the outer containment would remain intact in the event of a steam explosion or combustion data supporting their comments.
5. Detailed data explaining the short-term and long-term radiation levels and dosages to human beings at points 10 km from the plant, and in Hong Kong, in the event of a worst-case accident at the Daya Bay Station with worst-case meteorological conditions in relation to Hong Kong.

**Answer to questions raised at the Meeting on 27 June 1986 provided by Hong Kong Nuclear Investment Co.**

*Question 1* What contracts have been signed (by parties concerned) on the Daya Bay Nuclear Plant Project up-to-date?

*Answer* Contracts (and letters of intent) signed so far:

A. *Between Partners of the Power Station*

- Joint Venture Contract, GNIC/HKNIC
  - Electricity Off-take Contract 'A', GNPJVC/GNIC
  - Electricity Off-take Contract 'B', GNPJVC/HKNIC
  - Electricity Resale Contract, GNIC/HKNIC
- GNPJVC : Guangdong Nuclear Power Joint Venture Company,  
Limited
- GNIC : Guangdong Nuclear Investment Company, Limited
- HKNIC : Hong Kong Nuclear Investment Company, Limited

B. *Between GNPJVC and other parties*

- Initial contract with EdF for preparatory engineering work prior to concluding main equipment contracts (this contract is no longer effective and had been upgraded by letter of intent for EdF Project Services Contract, see below).
- Contracts with three consultants to provide services in the assessment of bids from Framatome, GEC and EdF (these contracts are no longer effective).
- Contract with Jilin Co. (PRC) for the site formation (excavation and reclamation) work at site.
- Contract with Jilin Co. for the structural excavation for the main buildings foundations.
- Contract with the First Bureau of the Guangdong Power Co. for the first stage breakwater on site.
- A number of small contracts (about 60 in number) for various works on site involved in establishing site services e.g. water, electricity supplies, temporary buildings, communications, lighting, slope protection, wharf construction and other aspects of site infrastructure.

- A number of contracts to Hong Kong and PRC organisations to undertake data collection at and in the vicinity of the site, e.g. meteorological, geological, hydrographic.
- Letters of Intent to Framatome (Nuclear Island and Fuel Assemblies), GEC (Conventional Island) and EdF (Project Services).
- Contract with Bechtel for Project Support Services.
- Contract with Quadrex/Gibbs and Hill for initial Quality Assurance services and training.
- Contracts for legal consultancy services.

*Question 2* How many other contracts are yet to be signed?

*Answer* It is impossible to give a number as contracts will arise throughout the construction period. However the main contracts that will be signed may be summarised as follows:

- Framatome (Nuclear Island and Fuel Assemblies), GEC (Conventional Island) and EdF (Project Services) to supercede the letters of intent referred to in (1).
- Nuclear Island civil works.
- Conventional Island and balance of plant civil works.
- Other smaller civil works contracts.
- Loan Agreement with Bank of China.
- Interconnection Agreement with GNIC, HKNIC, Guangdong Power Company and China Light.
- Nuclear Island equipment erection.
- Conventional Island and balance of plant equipment erection.
- Other smaller equipment erection contracts.
- Balance of plant equipment supply contracts (about 23 in number) being peripheral equipment not included in the Framatome and GEC contracts.
- Contracts for the supply and enrichment of uranium to be used in the manufacture of nuclear fuel.
- Quality Assurance Consultancy Contract.
- Other miscellaneous contracts for specialist services, specialist staff, minor works on site, miscellaneous equipment and so on.

*Question 3* What contracts are expected to be signed in the next three months—please give approximate dates.

*Answer* Contracts expected to be signed in the next three months are as follows:

- Framatome (Nuclear Island and Fuel Assemblies), GEC (Conventional Island) and EdF (Project Services) to supercede the letters of intent referred to in (1). Expected to be signed in August or September.
- Nuclear Island civil works. Expected to be signed in July or August.
- Loan Agreement with Bank of China. Expected to be signed in August.
- Interconnection Agreement with GNIC, HKNIC, Guangdong Power Company and China Light. Expected to be signed in August.
- Possibly some other miscellaneous contracts for minor work or services.

*Question 4* What is the estimate of expenditure so far expended in works at the Daya Bay site?

*Answer* Expenditure to 30 June 1986 for the whole project is about US\$90 million:

- Site works Approx. 50%
  - Land use fee for Daya Bay site; initial payments for FRA, GEC and EdF contracts; office facilities in Shenzhen; remuneration, and so on. 50%
- Outstanding commitments at 30 June 1986 is estimated to be US\$40 million.

MR. CHEN: Sir, the Chernobyl nuclear disaster has alarmed the nuclear industry around the world. Planners and operators alike in many countries are now taking a serious look at the security precautions at their nuclear power installations, some have second thoughts about their projects which are about to be implemented. Hong Kong, with the impending implementation of the Daya Bay project at her door step, is not alone in this dilemma. In view of the close proximity of Daya Bay plant, the people of Hong Kong have reasons to be concerned about safety, but I must hasten to add that the problems of safety must be viewed rationally.

Sir, I would like to begin with the words of Mr. Richard T. KENNEDY, Commissioner of the US Nuclear Regulatory Commission. When he addressed the investigators for the President's Commission on the Accident at Three Mile Island, he said 'Safety begins with the fellow who conceives, designs, builds and operates the plant.'

During the open discussion held in this Chamber a few days ago, we have heard a great deal from the experts on the safety in the design and construction of the Daya Bay power plant. As time is short for this debate, I do not propose



elaborating or repeating the details of all the safety features which I consider to be reasonable and technically acceptable. I believe and have no doubt that the joint venture company team, led by Electricite de France (EdF) will design and construct the power station in such a way that the Daya Bay plant, if built in France under the environmental conditions prevailing in Daya Bay, would be licensed to operate in France. In other words, I have no worry on the design and construction aspects of the power plant.

Sir, my real concern is in the post-commissioning management of the plant, i.e. operation and maintenance. The Three Mile Island investigations revealed that, although the accident stemmed from many sources, the most significant deficiencies were in operational safety. These included the number, organisational qualifications, training, and support of both the operating staff and the management of the plant. Human elements in reactor safety had been under-emphasised compared with the attention given to the hardware aspects of reactor safety.

I was pleased to learn at the open discussion that arrangements have been made for the staff who will be involved in the operation and maintenance of the Daya Bay power plant to receive intensive training in France. These trained personnel would operate the plant for the first five years under a station manager chosen by HKNIC. He would be assisted by a deputy from the Chinese authority who, at the end of the first five years, would become the manager of the plant. For the following five years, HKNIC would have the right to choose the deputy station manager of the plant. With this arrangement, HKNIC would be able to retain some measure of influence over the post-commissioning activities during the first 10 years of the plant. In my view, this arrangement is not entirely satisfactory. I would feel much happier if HKNIC, being a partner of the joint venture company, were to play a front role in the on-going day-to-day management of the power plant. The present 10-year arrangement should therefore be extended to cover the entire life period of the plant. This will ensure continued injection of expertise and experience from outside which is desirable, bearing in mind that Daya Bay will be the first commercial reactor to be operating in China.

Additionally, what I would like to see is an independent body to monitor the plant performance, especially the operational safety. In all developed countries where nuclear energy is deployed, there are statutory regulatory bodies such as the Nuclear Installations Inspectorate in the United Kingdom and the Nuclear Regulatory Commission in the USA, whose main task and prime responsibility is to protect the health and safety of the public. They play an active role in the control and monitoring of each and every stage of the development of a nuclear power installation with special attention to operational safety. In the United Kingdom the Nuclear Installation Inspectorate approves all operating instructions and even lays down maintenance procedures and frequency before initial operations of the plant. I am not aware if such a body exists in China but

even if it does, it would hardly have had any experience in the management of commercial reactors. I suggest therefore that perhaps an authoritative international body, like the IAEA, should be engaged to act as an independent monitor for a period of time, say for 10 years, so as to enable an unbiased record on operational safety to be established, and such records could, if necessary, be made available to the public. I am sure this is a good way to establish public confidence.

Finally, I believe that further down the station management line the important executive position of the reactor physicist ought to be emphasised. Being the person responsible for the safe operation of the reactor, he must have uncompromised authority to shut-down the plant when he sees an imminent danger in the reactor operation, and his decision should not be compromised or overridden by other system considerations. This would help eliminate erroneous or untimely decisions in an emergency situation, which often happen in a complex bureaucratic organisation.

Sir, we are all fully aware of the danger of a Daya Bay nuclear fall-out to Hong Kong, but we must not lose sight of a political fall-out from Daya Bay which could just be as damaging.

MR. ALLEN LEE: Sir, the people of Hong Kong have been repeatedly preached the message that we should not be afraid to speak our minds and make known our demands. It was postulated that the most detrimental element to our future stability and prosperity would be that the people of Hong Kong would not speak out loudly and express clearly the true feelings inside our hearts.

To a great extent, I agree with the sentiment that we should be frank and honest, yet, as a responsible citizen, I do not believe in just shouting and yelling whatever comes into one's mind without balanced, rational analysis. The subject of the Daya Bay nuclear power plant has unfortunately since the accident at Chernobyl, in my view, degenerated somewhat into too emotional an issue; skilfully exploited by activist groups in fanning the citizens of Hong Kong into a frenzy of fear. Just last Wednesday in this very Council, during the triad debate, we heard that public opinion should be viewed with the greatest care because it is so easy to influence public opinion by framing the right questions. I agree.

Sir, last Sunday, in a signature campaign designed to put a stop to the construction of the Daya Bay nuclear power plant, the poster prominently displayed a big devilish cloud of radiation hovering over the small island of Hong Kong with the words 'Daya Bay' written on the right wing of the devil and the nuclear power plant on its left wing. This, Sir, is the poster. (He displayed the poster to the Council.) I wonder if this poster can be printed in our Hansard. Anyone who takes a look at this poster would be scared out of his wits, particularly young children. It seems to me that the poster has been designed to project instant images of fear. The political overtones are so stark

nakedly clear that I would be failing in my duty if I do not point this out and urge the people of Hong Kong to reflect carefully before taking the plunge to fall into an emotional trap.

As a citizen of Hong Kong, like others, I am equally concerned with the safety, management and maintenance aspects of the proposed Daya Bay nuclear power plant. It is certainly reasonable for us to raise questions and reflect our concerns in this regard. Sir, it is due to this very reason that the unofficial Members of the Legislative Council have decided unanimously that fact-finding trips to the United States and Europe would be organised. We form these delegations because of the concerns of the people of Hong Kong. Findings of these delegations should definitely be made open to the public. We carry with us the duties and responsibilities of Legislative Councillors of Hong Kong. The delegations hope to be able to enter into common sense discussions with independent experts of advanced countries in this field so as to help to enrich our knowledge in order to facilitate our passing on, through the good offices of our ever news hungry media, the knowledge we have gained to the people of Hong Kong. Despite the basically thankless nature of our job, we are prepared to meet our obligations to Hong Kong with determination. Therefore, I urge the public of Hong Kong to either write to us or make representations to the Legislative Council on the questions that they wish us to ask. Furthermore, I am in full support of Miss Maria TAM'S suggestion that final signing of the relevant commercial contracts ought to be deferred until the delegation's report is made open to the public.

Sir, in my view, we should not politicise the issue of the Daya Bay nuclear power plant. We have heard the anti-nuclear activists say that the pressurised water reactor system is the most dangerous system. Yet, we equally have heard from other nuclear experts, both from overseas and locally, state categorically that the pressurised water reactor system is relatively safe. We, as a community, must satisfy ourselves in the aspects of safety, Chinese management and maintenance.

Having said all of the above, I hope the Chinese Government will reconsider the viability of the Daya Bay nuclear power plant project. I say this not because of political forces but purely on economic grounds. When the Chinese Government did the feasibility study on nuclear power in the late '70s and early '80s, the oil price was very high. At that time, no one could predict the price of oil and coal today. Is there any economic justification to construct a nuclear power plant instead of a coal-fired plant based on today's knowledge? Since Hong Kong will buy 70 per cent of the electricity from China, a coal-fired plant will guarantee the returns as the electricity charges from China will be no more than Hong Kong's electricity charges at that time. Even though no one can predict the price of oil and coal in six years' time, it may be safe to say, with a coal-fired plant, the Chinese Government will not have to worry about the return on investment. Perhaps the experts in China Light and Power can tell us

the capital cost differential between a coal-fired plant and a nuclear power plant of the same generating capacity. Nevertheless, it is fair to surmise that logically and rationally speaking, at the end of the day, it is the Chinese Government who must make the decision of whether or not to build the nuclear power plant at Daya Bay.

Sir, I am disappointed at the Government for not having a Department of Science and Technology and a number of my colleagues in this Council share the same view. A Department of Science and Technology is definitely needed in Hong Kong and one of its duties, amongst many others, would be to take the lead in explaining to the people of Hong Kong on the issue of nuclear power. Sir, it is more than worthwhile for the Administration to consider establishing this ever important department within the Government. All you have to do is to look at the countries around the world. Which countries do not have either a department or a ministry of science and technology? The portfolio of this department should be wide-ranging. This world is entering into a technological era. I fail to understand why our Government takes this subject so lightly. Therefore, I am using this opportunity to urge the Government once again that we need to set up a Department of Science and Technology and we need it urgently.

MR. WONG PO-YAN (in Cantonese): Sir, as a university graduate with a science degree I began working in an industrial research institute in China on 1 August 1945. On 7 August, I read in the paper that the first atomic bomb had been dropped by an American bomber on 6 August in Hiroshima in Japan. I vividly recall the headline of the newspaper quoting a foreign news agency report that the devastating power of the atomic bomb would make Hiroshima barren for 70 years. This I believed.

I visited Japan for the first time in August 1954 and I learned that Hiroshima was being rebuilt at the time. In 1959, I visited the Atomic Bomb Memorial Museum in Hiroshima and realised that the report was inaccurate in saying that there would be 70 years of barrenness.

As a student of natural science and an industrialist, I can say that from press reports and articles in journals as well as information gathered in my daily contact, I have a certain level of understanding in nuclear science. To be frank, one of my children holds a doctorate and has been involved in the construction of nuclear power plant for the last 10 years. I have been getting quite a bit of information about nuclear power. (Should I make a declaration of interest in this respect?) With this understanding, I consider all along that nuclear science is one of mankind's greatest scientific achievements in the 20th century. Furthermore, nuclear power plants are landmarks of outstanding success in putting nuclear power to civilian use. Up to the end of 1985, there are 536 nuclear power units in the world with a total capacity of 413 281 megawatts. There are still 116 in the pipeline. The Daya Bay project includes two units of 900 megawatts.

I appreciate that many people living in Hong Kong are in a state of fear and uneasiness knowing that the Daya Bay nuclear plant being built by China is only 50 km away from Hong Kong. This uneasiness was not apparent when the Daya Bay development was first announced. The incident of the Chernobyl nuclear plant in Soviet Union in April this year brought about very wide reports and comments which in turn caused grave and widespread concern here. In view of the present situation, it would be extremely irresponsible of this Council and of the Administration to overlook this fear and uneasiness. Therefore, the adjournment debate today is essential. In fact, in the past few days I have read a great deal of substantiated documents on the subject, including a detailed report published in an authoritative journal in June this year on the incident of the No. 4 RBMK—1000 nuclear reactor in the Chernobyl plant in USSR. Here, as a 'copy cat', I would like to quote from the papers. However, due to the limitation of time, I would just recall a few points and hope that they can serve to clarify some of the problems we encounter.

First of all, I should say that Hong Kong is a relatively developed city in culture and education. The knowledge and learning power of the community at large enable us to make observation scientifically and draw conclusions, otherwise we would not be as successful as we are. In my opinion, the general fear and uneasiness towards the nuclear project at Daya Bay are mainly due to the lack of sufficient understanding of the project. In the circumstances, it is imperative to convey factual information on this matter to the public.

Let us look at this example. People may assume that since an atomic bomb can level an entire city, a nuclear power plant would be equally destructive and dreadful should it 'explode'. However, if they know that the Uranium 235 that incur nuclear fission for the atomic bomb is highly enriched (although I have no documentary proof to say that the concentration is 100 per cent), and that the enriched U-235 in the fuel pins of a nuclear power plant is only 3 per cent or up to 7 per cent concentrated and will not 'explode', their fear should vanish. Of course, the leaking out of radio-activity is a possibility, but, there are means of prevention.

From newspapers, we often come across reports on the problems of nuclear power plants, such as:

- (1) The Three Mile Island incident in USA in 1979. A report was produced by a commission after detailed investigation. It was found that the incident did not cause any death and the radiation leakage was not significant. The experience of this incident has greatly helped to improve the safety standards in nuclear power plants in the ensuing years. For example, the danger of explosion that can be caused by the accumulation of hydrogen at the time of the incident is now removed by a new design to condense the accumulated hydrogen into water. The nuclear power plant is installed with pressurised water reactors (PWR). The Daya Bay nuclear power plant will have similar installations.

- (2) The Chernobyl incident in USSR in April this year. The whole matter is still under investigation. Although there have been quite a few casualties, the situation does not seem to be uncontrollable. Radiation does not appear to be causing very serious problems. Besides, the design of this plant is different to that in Daya Bay. According to the American journal, this plant would not have been issued a certificate of operation in US or Western European countries. Therefore, it is not proper for us to compare the Daya Bay plant with that in Chernobyl.
- (3) The question of distance between a nuclear power plant and the nearby residents. I have the information that a nuclear power plant still under construction in USA is about 30 miles from a big city. There are more than 140 000 residents within 10 miles of the plant. The population within the 10 km to 50 km radius is over three and a half million. The nearest residential settlement is only 2 300 feet away. This shows that people can live quite near to a nuclear power plant.
- (4) The safety of PWR reactor. According to the documents I have read, 374 reactors are in operation as at 1 January 1986, with 189 of them being PWRs. Of the 157 units under construction, 113 are PWRs. The pressurised water reactor is of a more recent design and is also recognised generally as safer. I must say that I do not consider nuclear power plants 'absolutely' safe. There is no such thing as an 'absolutely' safe industry in this world. Our question is—'Are the safety standards acceptable to us?'

On 14 May, Chancellor Helmut KOHL in West Germany rejected calls from the opposition to close down operating plants. While admitting that thousands of people are shocked by the Chernobyl incident, he declared, however, that—'What is needed now is not a German withdrawal from nuclear energy, but the start of international efforts towards greater nuclear safety'. Hence, I would say that we need to let the general public know the scenes behind the generation of nuclear power and proceed to demand that the Daya Bay power plant must have a comprehensive safety system. This is a responsibility which the Government cannot evade. Just as we can see from the Danish parliamentary debate on 7 May, the Danish Government promised to seek a meeting to discuss with the Swedish authorities the safety measures of the nuclear power plant at Barseback within Swedish territory but near the Danish border.

This Council understands the public's concern and anxiety about the Daya Bay nuclear power plant and is organising delegations to visit Europe and the USA to study the safety measures of nuclear power plants and the attitudes of the residents in their vicinity. This is a realistic and responsible act which I support whole-heartedly and wish it every success. I believe that first-hand knowledge will be more substantive and direct than what I can provide today. I hope the general public of Hong Kong will view their report with an objective and unbiased attitude.

I understand that our Secretary for Economic Services has also left for Europe to obtain information. I am sure there will be a lot of helpful information on his return. I have handed over to Miss Maria TAM, the Convener of the Panel dealing with these matter, the publication in my possession and hope it will serve some useful purpose.

Finally, I must apologise for the length of this speech.

MR. CHAN KAM-CHUEN: Sir, the word 'nuclear' is very controversial and the fierce arguments between the 'pros' and 'cons' camps split nations and resulted in quite frequent demonstrations and violence.

#### *The odds*

Nuclear power was considered as a 'cheap and clean' source of energy. Its advantages were quite significant during the oil crisis. Governments of countries which are not rich in natural fuel resources or heavy users of energy such as developed industrial nations, committed themselves to 'nuclear power' plans and took the calculated risk that a core melt-down may only occur once in a million years.

However, the Chernobyl nuclear disaster in April 1986 has made governments with nuclear power plans, doctors and scientists specialised in radiation injuries, nuclear power plant designers and so on quietly re-evaluate the safety and harmful effects of this melt-down. Outwardly, governments concerned play the whole incident down to alley the fear of the people.

Even after deducting all those minor incidents which did not kill, the odds of a major nuclear power plant melt-down has now raised from one in a million years to one in 30 years.

#### *Absolute safety*

Over confidence in advanced technology and ignorance of (or choose to ignore) the risk have made installations of power plants near populous cities cut down the cost of the power transmission system. Even in the field of advanced hi-tech, with the most stringent and long check-list, tragedy still occur, due to human errors, computer faults and unforeseen reasons. There is no absolute safety.

Besides the human element and subsequent cover up, the following are main areas of concern:

#### *Earthquakes*

One can only base on past records but in fact, no part of the earth is entirely free from earthquake. Depending on the fault of the earth plate which this part of territory stands on and whether the fault moves and changes in intensity, one may say the risk is unpredicable.

*Wind*

The average direction of wind in this area is 80 for the last five years and as it is mostly in a north-easterly direction, the chance of getting nuclear fallout cannot be ruled out.

*Food and water supply*

In case of a fallout our food supply and water in open reservoirs will be contaminated. Why are people not buying mutton in the United Kingdom which is some 2 200 km from Chernobyl?

*Explosives*

One may recollect that due to ignorance of safety or due to an unbalanced mind, explosives were carried into a railway station in a capital and caused extensive damages and loss of human lives. This is one possibility which could not be entirely ruled out.

The pressure which plain concrete can withstand is between 70 to 700+ kg per cm<sup>2</sup> and the tensile strength of even the best steel is of the order of 15 000 kg per cm<sup>2</sup>. The strength of the best reinforced concrete and prestressed concrete lies between these figures. But the detonation waves of dense explosives causes temperature and pressure to 5 000 C and 200 000 kg per cm<sup>2</sup> respectively.

All safety devices including the containment barriers and standby coolant systems will be destroyed instantly and a melt-down may then start.

*Evacuation area*

For countries with a vast land area, a 10 km evacuation plan may be acceptable. Those living over 10 km from the centre may have time to evacuate to the four corners of the country.

I have read an extract translation of the 'Reactor Safety Study' of the US Nuclear Regulatory Commission which estimates 3 300 deaths within a few weeks and 45 000 injuries within 290 sq m of the centre should evacuate and a total area of 3 200 sq m should be declared a polluted area.

*Radiation injuries*

Besides the immediate deaths of victims in the worst scenario, 45 000 may die of cancer within the next 10 to 40 years and there may be 5 100 types of genetic mutations. This may explain why pregnant women around Chernobyl are seeking abortion.

*Economic benefits*

For the average family using about 226 units of electricity in a month at a saving of say 5.6¢ (If this is not swallowed up by the permitted profit and development fund under the scheme of control), my family would be saving \$12.66 per month.



Of course, industry and large users might benefit more, but if a disaster occurs, damages and mop up expenses may run up to tens of billions of dollars. Does the slightly cheaper electricity pay?

A wealthy man looking through the glass pane of a window down a street was asked what he saw and the reply was *people*. When asked what he saw in front of a glass mirror, he replied that he saw *only himself*. The difference was of course the 'silver' behind the glass. This fits the Chinese saying (利令智昏) i.e. self interest clouds prudence. Are we selling our souls to the devil by putting millions of lives at risk?

### *Confidence*

It is no use proving whether the above figures are 100 per cent accurate or whether the people's fears are real or imaginary. The damage in confidence is done. Those who have obtained their foreign passports and come back to Hong Kong to continue their money-making and the silent majority who have the means to emigrate but adopted the wait-and-see attitude would not accept this challenge. The feeling of insecurity of a guillotine hanging over one's head will tip the scale and will execute their own private 'evacuation plan' before the operation of the nuclear power plant.

In conclusion, is it good and responsible strategy to place one's Achilles heel near the coast open to sea and air attacks which could cause instant panic and extensive damages in the most prosperous city of a country? One has to sort out the priorities and look for options.

MRS. FAN (in Cantonese): Sir, it is natural for residents in Hong Kong to have fears and worries about the construction of a nuclear plant in Daya Bay. Although I cannot exclude the possibility that the out-cries made by certain people are based on political grounds, I believe that the utmost concern of most people is the effects of building a nuclear plant within a distance of 50 km from Hong Kong. For example, in case of a serious accident, what degree of damage will it cause on us? Many people are asking: 'What we may likely get in exchange for the risk we are taking is but a slight reduction in electricity tariffs. But is this worthwhile? Why can't we consider more economical electricity consumption to reduce the amount of power required? Are there no better ways than to use nuclear-generated electricity?' The people of Hong Kong need more information, as well as a rational and scientific attitude to analyse these problems.

Judging from available information, the chance of a nuclear plant accident leading to excessive radiation, food pollution and harmful effects on human bodies is rather slim, but not totally non-existent. The design of the Daya Bay nuclear plant includes many self-activated contingency devices. Theoretically one may infer that many mishaps will be automatically controlled or at least contained, if the plant is well-maintained. To take care of certain human

factors, nuclear power specialists have already devised various preventive and safety measures based on accumulated experience. If these measures are vigorously implemented, it is believed that the chance of having an accident will not be high. But in case there is mismanagement, improper maintenance, negligence or irresponsibility on the part of the operational staff, then the chance of an accident occurring will be relatively higher. Many people in Hong Kong still have reservation on the current management ability and experience of China. Although the representatives of the Hong Kong Nuclear Investment Company (HKNIC) have given assurance that the company will, during the first five years of operation, employ Belgian specialists who are experienced in managing nuclear plants to take charge of the management of the Daya Bay nuclear plant, the people of Hong Kong are still doubtful. This is because past experience has shown that foreign management staff working in China are often frustrated by divergence of views and limitations in working environment, so that they may not be able to give their best in terms of efficiency. Therefore, the worries and doubts of Hong Kong people in this respect are not unfounded. Is it possible for the Hong Kong Government to relay these worries and doubts to the Chinese authorities through the Sino-British Joint Liaison Group? It is hoped that they will be able to understand the feelings of Hong Kong people and consider the introduction of some measures which will set their hearts at ease, e.g. by allowing specialists resident in Hong Kong to participate, in an independent capacity, in monitoring the construction and operation of the nuclear plant.

Many people have no knowledge of the method of generating electricity by means of a nuclear pressurised water reactor. Are there any contingency and evacuation plans for people residing within 50 km of the nuclear plant? Are there any effects on their daily life and psychological state? What are the working conditions of the staff responsible for operating the reactor inside the nuclear plant? In case of emergencies, what rescue teams will be mobilised? What are the routine training processes like? What are the safety measures and issues which the staff must pay attention to? This whole series of questions need to be answered, so that members of the public could have a better understanding and be able to take this issue in a rational manner. Legislative Councillors are no nuclear power specialists. But in dealing with this issue which has great effects on the stability of Hong Kong, they have a responsibility for making active on-the-spot study, to understand the problem and to reflect the deep concern of the local people about the nuclear plant. Therefore, I support the two Legislative Council delegations to USA and Europe to study the various problems I have mentioned, and as far as possible to report their findings at every stage, to the public. The report of the two delegations must, of course, be open to the public. In the interest of the Hong Kong people, it is hoped that the Hong Kong Government will forward the report to both the Chinese and British authorities for their reference.

The power to decide whether the construction of the Daya Bay nuclear plant should proceed does not rest with Hong Kong. But as a member of the Hong

Kong community, the HKNIC could, in consideration of the worries of the local people, reconsider whether it is appropriate to proceed with the construction of the nuclear plant at full speed now, before members of the public have a chance to analyse in detail the pros and cons of having a nuclear power plant. Since the report of the two Legislative Council delegations is expected to be completed in September, the HKNIC may as well decide on its next move after the publication of the report. Of course, under the principle of free enterprise, the HKNIC has the right to do things on its own. But since this matter might affect the lives of the people and the stability of our society I hope they would think twice before they act.

In order to sound out the feeling of the Hong Kong people on the construction of the Daya Bay nuclear power plant, and to obtain their views, a group of zealous people have started a signature campaign. Their original intention is correct and some people actively took part in the campaign, putting up in various places posters which emphasise that the Daya Bay nuclear power plant is harmful to Hong Kong, and personifying it as an ogre overwhelming and threatening Hong Kong. Is it an objective and reasonable behaviour to aggravate the fear of the local people in this way before they have got hold of sufficient information? Secondly, from the angle of an educator, is it proper for a school principal or teacher to encourage primary students and their parents to sign in the campaign? Most people would agree that primary students still do not have the ability to distinguish between right and wrong. Moreover, they are only at the first stage of their learning process; how could they have any knowledge about the nuclear power plant? Is there any meaning in securing their signatures in such a way? On the other hand, some newspapers have included certain feature articles in addition to their local news coverage on Daya Bay, presenting information on nuclear power in an objective and unbiased manner. I am all for this approach because this is the real way to help the public to understand the problem. I hope the press will continue their work in this respect, so as to prevent the public from being influenced by biased information, and to encourage them to analyse and judge this incident in a rational and cool attitude.

MR. YEUNG (in Cantonese): Sir, public aspiration and confidence are the basis and impetus of prosperity and stability in Hong Kong. All parties concerned must exercise utmost care and think twice before deciding on the construction of the Daya Bay nuclear power plant. If any party insists on having its own way and neglects or ignores the facts, all parties will directly or indirectly suffer unnecessary loss.

It is an undeniable fact that nuclear power will provide a solution to the energy crisis in the next century. The use of nuclear energy has been confirmed as one with great economic benefits. Countries lacking in traditional energy resources do not have any other choice. It is understandable that districts in south China which are in urgent need of electricity supply for development have

to take a small risk in order to gain more economic benefits. In Hong Kong, electricity is mainly coal-fired and there is no problem in the supply of coal. Hence, there is no need for Hong Kong to obtain electricity from the nuclear power plant at the present moment. However, consideration must be given to this matter on a long-term basis. In future, the major energy resources on earth will be nuclear power. Nuclear power generation will continue to develop and nuclear-generated electricity will ultimately be cheaper.

As a matter of fact, no expert has ever claimed to be sure that any one nuclear power plant is completely free from danger. Investment has to be increased in order to reduce the risk factor. The anti-nuclear drive currently in progress focuses on the safety problem. So far, there has not yet been any absolute guarantee of safety. Daya Bay is 50 km from Hong Kong. If any untoward incident occurs and more than 5 million Hong Kong residents cannot be evacuated, the tragedy can obviously be foreseen. A nuclear engineering professor of Washington University in USA pointed out that the assurance of safety at nuclear power plants depends mainly on safety planning and maintenance. If an accident occurs, rescue personnel should have ample time to adopt measures to prevent radioactive substances from proliferating. It can be seen that the training of Chinese technicians to manage the nuclear power plant and a concern over the maintenance and repair of the plant are very important. Before these measures are adopted and the requirement of 'safety first; quality first' is met, the worries of Hong Kong residents are easily understood. Although it is up to China to decide whether the nuclear power plant should be built, she should take an objective approach in understanding the reasons of objection put up by the people of Hong Kong.

In order to alleviate the worries of citizens over the safety of nuclear power and widen their scope of knowledge in this respect, Government must promote education on nuclear energy and implement proposals, especially those concerning the ways to promote public education on nuclear power in the report submitted by the United Kingdom Atomic Energy Authority. China has acknowledged that the key to developing nuclear power is an assurance of safety. Also, she insists on implementing the policy of 'safety first; quality first;'. In this regard, she could promptly announce in detail the five items of rules and regulations, the formulation and consideration of which have been completed. She could also send Chinese nuclear power experts to hold exhibitions in Hong Kong to present materials on the safety of the nuclear power plant. During this period, citizens should keep calm and invest their hopes in the Legislative Council fact-finding delegations on nuclear generation to Europe and USA in early August to see the operation of nuclear power plants there and collect information on safety and contingency plans for nuclear power plants. At the same time, the fact that Government has conducted on-the-spot inspections and essential surveys on contingency plans and safety measures indicates clearly its concern over the issue. It is hoped that after going through an objective analysis and assessment, the information thus collected will be useful to all parties concerned in making a wise decision.

MR. CHAM: Sir, soon after its inception, the economic viability of the Daya Bay nuclear plant project was examined by its financial advisers, Lazard Brothers, with reference to fossil fuel prices forecasts. Owing to commercial sensitivity, the financial analysis of the project is not available for Members' full scrutiny. Nevertheless, some economic benefits of it should be noted. First, according to the latest financial calculations it is probable by 1996, electricity generated by nuclear power will cost 24 per cent less to produce than by way of coal fire, given some assumptions of inflation and coal prices.

Another attraction of the project is the ability of China to obtain lower cost in export financing. Current indications are that export credit to facilitate plant procurement by China can presently be made at the credit cost of 7.4 per cent interest rate per annum. On the other hand, comparable costs in Hong Kong will be higher, at 8.75 per cent per annum.

In short, it may be said that the cost structure of a coal-burning electricity power plant entails two main cost components: namely, the coal element comprising 60 per cent of the cost aggregate and the capital cost of plant construction estimated to account for 40 per cent of the cost base. The full cost of coal is to be determined by its average price then prevailing in Hong Kong, whereas the capital charge given by the 1992 cost of building a coal-burning plant budgeted in relative terms vis-a-vis that for the Castle Peak B Station, amortised over 20 years. Despite the confidential nature of the profit margin, I understand that it has been fixed by virtue of the joint venture contracts and as such it cannot be varied. Thus, this precludes transfer pricing of such a nature as to enable exorbitant prices to be charged. This measure will in turn help to stabilise the price of nuclear-generated electricity to be purchased and sold by China Light and Power to the public in Hong Kong.

Furthermore, as a price ceiling, the relevant joint venture contracts provide that electricity to be purchased from the Guangdong Nuclear Investment Company cannot exceed the cost of coal-burnt electricity for the first six years of the nuclear plant's operation.

In spite of the appearance of a tenable economic argument for the proposed nuclear plant project, one must bear in mind that the logic of decision theory demands us weighing the benefits of a project against its probabilities of occurrence in order to determine its expected value. The basic problem in applying such analysis for decision making is that the cost of a nuclear disaster would have effectively nullified all of its economic benefits. While we are ready to pledge our faith in the competence of the scientists to provide adequate safety measures and the low probability of a disaster, we much recognise that the determining criterion of the project endeavour is its safety outlook. This latter attribute, if eroded or threatened, could have wiped out whatever economic worth that may be attached to the project. To this end, the Legislative Council delegation to examine the safety aspects of nuclear plants in Europe and North America is clearly a step in the right direction.

MR. CHENG: Sir, the energy crises experienced in the past and the predictable shortage of energy resources in the future have prompted many developed countries to seek alternative forms of energy. One of the viable sources involving high technology is nuclear power which is quite certain will eventually become most essential in civil use to maintain economic growth. I believe the Daya Bay Nuclear Power Plant was first proposed on this fundamental basis.

However, I do share the concern of the general public about the safety of this power plant which is to be situated only 50 km away from Hong Kong.

As a professional engineer, Sir, I fully appreciate that a nuclear power plant is an extremely complex installation involving multi-disciplines of engineering and technology and designed to the highest possible international safety standard. The pressurised water reactor supplied by Framatone in this instance is considered one of the best systems in the world with proven record of performance and safety. It is my understanding that the use of containment barriers, not like the Chernobyl power plant, is an ultimate protection measure against release of radioactive products in a postulated accident. The safety analysis by the French authorities, as I am aware, is initially concerned with verifying the soundness of these barriers under normal operating conditions and subsequently evaluating their required function in accident or worst conditions. In actual practice, these barriers may be adequately designed and constructed to satisfy any conceivable safety requirements.

Safety rests essentially on a proper design, a quality controlled construction and appropriate operation and maintenance. None the less, I do believe that events not taken into account in the original design could well happen in a plant such as what happened in the accident at Three Mile Island which is a similar type of reactor. It is therefore necessary to incorporate supplementary provisions in the design and special procedures in the operation.

We are given to understand that the Daya Bay nuclear power plant is so designed that it would not require evacuation beyond a 10 km radius of the plant in the unlikely event of an accident but we have yet to be assured how this criterion could be justified by any scientific or technical evidence appropriate to this particular instance.

As I am aware, it is a normal practice in other countries that safety assessment report is made available to the public followed by a public hearing through the licensing procedure. It is unfortunately not the case for the Daya Bay nuclear power plant. I therefore consider it logical for the people of Hong Kong to be provided with detailed information about the safety aspect to which they have the right in view of the closeness of the installation.

Despite the fact that intensive training of operating staff will be under way and Framatone will continue to be involved in the operation of the plant for the first 10 years, permanent on-going supervision and monitoring are still required. I therefore urge the authorities to consider commissioning an

independent nuclear installations inspectorate as a long-term measure to monitor closely the operation and maintenance of the plant throughout its life span.

Having said all these, Sir, I am of the opinion that Hong Kong Government and the Guangdong Nuclear Power Joint Venture Co. have a duty to allay the fear of the people of Hong Kong which is understandable. I therefore urge the authorities to release the following information to secure the confidence of the general public:

- (a) The feasibility report and safety assessment report compiled by the China Light and Power Co. Ltd. and the Guangdong Power Co.
- (b) The report on the review of the technical aspects of the project prepared by Burns and Roe.
- (c) Harwell report on the assessment study of the probability of accidents and the consequences for Hong Kong.
- (d) The Harwell report on the design of an outline contingency plan for Hong Kong.
- (e) The environmental impact report and initial safety analysis report prepared by the Guangdong Nuclear Power Joint Venture Co.

Finally, Sir, I hope the authorities would appreciate that the fear and anxiety of the public over the Daya Bay nuclear power plant have a far-reaching implication for Hong Kong's stability and prosperity and their concern should not be lightly dismissed.

MR. CHEONG-LEEN: Sir, I was in Europe when the Chernobyl accident took place, and because it has so far been the biggest nuclear power generation accident in the history of mankind, I, like many others, have been following developments with a great deal of interest. And because of the continuous media coverage of the proposed Daya Bay plant, I have had quite often to remind myself to remain as unemotional and objective as it is possible to do so. But without question, my primary concern at all times has to be the long-term interests and well-being of Hong Kong's 5.5 million people. So I hope what I shall be saying in the next few minutes will be as unemotional and objective as I can make it.

Firstly, had it not been for Chernobyl, the impending signing of the various contracts for the Daya Bay nuclear power plant would have generated overwhelmingly much more support than opposition in Hong Kong. As it is today there is, because of Chernobyl, considerable local concern and strong reservations—and even opposition—at the prospect of having such a plant built at Daya Bay.

At this point in time, a great many Hong Kong residents are not concerned about the economics of the project—even though in terms of public finance this is an important factor. Nor are they so much worried about the high standards

which will no doubt be adhered to in the building of the plant, nor are they swayed by the genuine commitment towards maintaining a high standard of operational efficiency and safety once the plant is completed.

What many Hong Kong residents are saying is that no nuclear power plant is as yet fail-safe, whether it is of the Chernobyl RBMK type, or the French PWR type which has been selected for Daya Bay. In the past 30 years, many plants have been built near large concentrations of population in Europe and the United States, but in the light of Chernobyl, should this still continue no matter how good a track record a particular type of reactor may have, nor how relatively safe it is claimed to be. The widespread fear of nuclear radiation fall-out in case of any nuclear power accident with attendant genetic consequences to human life is today very much a fact of life in Hong Kong. Partly, this fear has to do with the long-held Chinese tradition that the best possible provision for continuity of life should be made for their children, grandchildren and future generations to come. The political factor of post-1997 Hong Kong may well be compounded by the risk of nuclear radiation arising from a possible accident at any nuclear power plant to be built near Hong Kong.

Secondly, this deep concern and fear on the part of Hong Kong people has to be carefully weighed and assessed by the Chinese Government who makes the decision whether or not to build the Daya Bay plant:

- (a) Should it go ahead and sign the series of pending contracts in the coming months so that building the Daya Bay nuclear power plant can commence?
- (b) To what extent will the decision to go ahead be linked with the post-1997 stability and prosperity of Hong Kong; and the general confidence of Hong Kong's by then 6.5 million residents? The magnitude of the political risks will need careful examination.

We in Hong Kong shall have to await China's decision one way or the other.

Thirdly, this Legislative Council has in the past few months been seeking to learn as much as possible—particularly through the UMELCO Public Utilities Panel—about the proposed Daya Bay nuclear power plant.

It has now been decided to proceed one step further, that is, to send two fact-finding delegations, one to North America and the other to France and Vienna, to learn among other things especially about contingency plans for densely populated metropolitan areas located within 50 km from nuclear power plants, and to report back to this Council's In-house Meeting within six weeks of such visits.

As a legislator, I believe these two overseas visits are in the best interests of Hong Kong people. And that is why I have decided to participate as a member of one of the delegations.

Sir, I support the motion.



DR. CHIU: Sir, opposition to Daya Bay nuclear power plant has been snowballing. A lack of information about the project has created fears and worries among us. This issue has developed from an economic and social issue to a political issue which may lead to a confidence crisis.

Hong Kong residents' concern about this project is understandable. The Chernobyl disaster in the Soviet Union is still fresh in our minds. Its impact is so influential that it has driven away our confidence in all nuclear power plants in the world including the one in Daya Bay. It has almost come to the stage that we are worried when the Chinese nuclear experts said that the plant is 99 per cent safe; we are even more worried when we are told that the plant is 100 per cent safe.

To make the situation even worse, while China said the pressurised water reactors were the safest design, a British nuclear physicist from the anti-nuclear lobby team said that it was the most dangerous device. We simply do not know which side we should believe.

Politically, we have come a long way since the Sino-British talks about Hong Kong's future began to take place. We have been trying very hard to secure the prosperity and stability of this territory, but worries about the Daya Bay plant will offset all our efforts. This is too high a price to pay.

My hon. colleagues supported the suggestion of organising a fact-finding tour to overseas countries to gather more objective views, to assess the operating and maintenance requirements in similar plants and the associated risks and to get information on safety and contingency measures. During our visit, we shall meet government officials, nuclear power experts and the general public to collect their opinions on nuclear power plants. When we come back, we will share with Hong Kong people all the information and experience we get. Based on the facts, we will see what we should do next.

In any case, even if the collected facts indicate that the Daya Bay plant is not as undesirable as we consider it to be, we will still urge China to ensure that the Daya Bay plant is up to an international standard and that the maintenance and contingency be overseen and closely monitored by a joint committee with the participation of Hong Kong and overseas experts. When the facts obtained reveal that the construction of a nuclear power plant 50 km away from a densely-populated city like Hong Kong may endanger our lives, we will work together to reach some proper decisions and formulate strategies to deal with the Daya Bay issue for the best interests of our community. If necessary, a trip to Beijing will be considered to enable us to reflect our worries and strong feelings to the Chinese Government and to appeal to them to reconsider their plans in the light of the adverse effects on the prosperity and stability of Hong Kong.

Sir, with this important mission, we would like to set off as soon as the necessary arrangements have been made. I would like to take this opportunity to urge the China Light & Power Co. and the Hong Kong Nuclear Investment Co. to influence the Guangdong Nuclear Power Joint Venture Co. to postpone the schedule for signing contracts for the time being so as to give us some more time to do what needs to be done.

MR. CHUNG (in Cantonese): Sir, the Daya Bay nuclear power project to be undertaken by the Guangdong Nuclear Power Joint Venture Co. Ltd. (GNPJVC) has caused grave concern among the people of Hong Kong. Their primary concern relates to safety of the plant. They fear that in the event of an accident, the result would be fatal as there is virtually no way of escape. The GNPJVC experts point out that even in the event of a serious mishap in the plant, the health of people living beyond a 10 km radius would not be affected and evacuation would not be necessary. However, on the other hand, various groups opposing the project hold the opinion that the level of safety of the type of pressurised water reactor to be installed there is far from desirable. Furthermore, as the site of the plant is only some 30 to 50 km away from Hong Kong, it is inevitable that there exists a certain degree of risk.

The pros and cons of this issue and the controversies surrounding the 10 km and 50 km radii theories appear to have been formulated on different backgrounds and standpoints. With the lack of substantial data to back the arguments, the general public have failed to see the issue in perspective and this only generate further queries. The problem now is how to remove the element of fear. This Council has taken up on itself the obligation to remove the worries of the people. For this purpose, I strongly support the idea of setting up Legislative Council fact-find delegations which include Members with knowledge in nuclear and scientific fields to visit nuclear plants in other countries. The delegations will obtain more information on the safety standards and operation of these nuclear plants. I hope that public confidence will be won with this objective analysis of the situation from an independent standpoint. None the less, I am fully aware that no technological devise is 100 per cent safe. In the event of prolonged usage, or occasional human error or wear-and-tear of the old parts, accidents may occur and cause hazards. As the saying goes, 'one should be vigilant even in peaceful times'; people would therefore have to be prepared psychologically. In this connection, I would like to make the following points:

- (1) Do we have plans to ensure that the Daya Bay nuclear power plant satisfies the highest safety standards in terms of design, maintenance and operation? On this, I would like the authorities concerned to draw on information available and give us 'specific explanation' on effective preventive measures to guard against possible hazards which a nuclear plant might have upon Hong Kong.
- (2) So far as Hong Kong is concerned, what monitoring programmes or contingency plans does the Government have in mind with respect to radioactive pollution problems from Daya Bay? If there were indications or reasons to believe that Hong Kong would be under direct exposure of a high level of radiation or if there were a nuclear catastrophe, will Hong Kong be in a position to have an adequate contingency plan for itself?
- (3) It is said that Hong Kong would definitely stand to benefit from the supply of 'purchased' nuclear energy. Yet the cost of preventive, security and contingency measures would mean a heavy strain on manpower,

finance and other resources. Furthermore, in the long run, if the fear of nuclear hazards still haunts the community at large, it would deter investments on prestigious landed properties. Under normal circumstances, how then, should we calculate the cost-effectiveness of a nuclear plant in relation to the above-mentioned setbacks and what remedies are available?

- (4) Geographically speaking, Hong Kong is entirely different from mainland China. Owing to its size and environment, no evacuation zone is available to people living in Hong Kong at time of contingency. Is the Government prepared to convey these worries and views of the public formally to the Chinese Government? Will Britain and China discuss this issue together and formulate remedial policies that are necessary?
- (5) If the International Atomic Energy Agency (IAEA) is invited to monitor the maintenance, management standards and the performance of the staff of the plant, the psychological stress of the public regarding safety of the plant would be reduced. Does the authority concerned concur with this view?
- (6) What plans do the authorities concerned have in mind to educate the general public on basic knowledge about nuclear power and their effect on health and the environment? With these plans, they will enable better public understanding of nuclear energy and sensible judgement on the pros and cons of the effects of the nuclear plants on our economy and in other respects.

I hope the Government would give serious consideration to these six points. In brief, safety problems of the Daya Bay Nuclear Power Project are the main concern that prompt public opposition to the project. Their reason for this fear is clear and simple and the bone of contention is not in China's nuclear power programme itself. While the question of Hong Kong being in dire need of nuclear energy is worth further consideration, China has its own good reasons to develop a civil programme for the generation of nuclear energy to provide for the future needs of electricity in its mainland area and to catch up with the technological know-how of the modern world as part of its modernisation and economic development programme. From the above observations, it is evident that unless China gives up its million-US Dollar Daya Bay nuclear power project voluntarily or moves the plant to another site further away, it would be difficult for Hong Kong people to persuade China to change its mind. On this basis, I am of the view that the fervent anti-nuclear sentiments in Hong Kong should be handled carefully by both China and Hong Kong. There should be co-operation in finding the right solution to the problem. As a matter of reference for the authorities concerned, I would suggest to defer the Daya Bay nuclear project for a reasonable period, say a year or two, so that there would be a chance for the Hong Kong people to cool off. During this interim period, careful deliberation could be made. Action should also be taken to accede to public request and provide them with information on the nuclear plant issue.

Reliable and practical contingency and evacuation plans should also be drawn up. When the public learned more of the subject of nuclear energy, their fear towards the subject could be reduced. On the contrary, the absence of a mitigating mechanism, the unwillingness to look after the state of mind of the people in Hong Kong and the obstinacy of each party to go ahead in its own way would be detrimental to the future stability and prosperity of Hong Kong.

Mr. Ho (in Cantonese): Sir, I welcome the opportunity which this debate provides to say a few words and to express my thoughts briefly on the question of our participation in the Daya Bay nuclear power plant, the proposed construction of which has aroused strong emotive feelings in Hong Kong.

It is understandable that ever since the Chernobyl incident, concern has arisen in Hong Kong about the safety of the proposed nuclear power station at Daya Bay and we must look at this matter in greater detail to ensure that it is indeed safe.

The issue has certainly generated strong feeling, much of which has been emotive and without a proper understanding of the technological aspects involved. I would like to urge that we look at this matter objectively and without panic. Blind opposition to nuclear energy for the sake of opposition is wrong as science has to move forward if it is to be of any benefit to mankind, especially one that will on completion bring immense advantage to the surrounding region and assist in China's modernisation which will inevitably benefit Hong Kong.

We certainly need more information and facts from the best nuclear experts in the field of nuclear energy before one can decide whether it is in fact safe to proceed with this project, although the decision is one within the sole discretion and jurisdiction of China.

Nevertheless, I strongly urge the Government to seek and provide the necessary information so that all may understand what actually is involved and be able to assess the risks associated with the operation of a nuclear power plant near Hong Kong.

As far as I am aware, China is sympathetic to our anxiety in so far as Daya Bay is concerned, but the reasons for opposing the project must be reasonable and rational.

Finally, I would like to close by saying that from what I have heard, there are essential differences between the Chernobyl plant and the proposed Daya Bay nuclear power station and that the weaknesses in the former probably contributed to the disaster at Chernobyl, a conclusion which is supported by the International Atomic Energy Authority which stated that 'from the information received on the Chernobyl accident it does not appear that new physical phenomena important to safety have been identified that would require action on other types of nuclear power plant'.

6.00 p.m.

ATTORNEY GENERAL: Sir, with your consent, the Standing Order 8(2) should be suspended so as to allow the Council's business this afternoon to be concluded this evening.

*Question put and agreed to.*

MRS. TAM (in Cantonese): Sir, the Daya Bay nuclear power project has now become a subject of major concern for Hong Kong people. What the public are especially concerned about are the safety aspects of the nuclear power plant for it is feared that should there be a nuclear fallout similar to the Chernobyl disaster in the Soviet Union, serious harm may be done to lives and property. Thus, although the Government has approved the China Light and Power Co. Ltd. to participate in the Daya Bay nuclear power project, in view of the Chernobyl incident and the general anxiety among Hong Kong people, I am of the opinion that there is now a need to conduct a review of the whole matter. When re-assessing the whole project, the following two factors are worthy of detailed consideration:

- (1) Whether buying nuclear power keeps in line with our long-term demand for electricity and fits in with our long-term energy policy.

The main reason why the Daya Bay nuclear plant project has caused so much worry and controversy among Hong Kong people in general is that it is only in the past few decades that nuclear technology has been developed and applied for use for peaceful purposes. Generating electricity by nuclear power is after all a new thing; nuclear technology and knowledge about nuclear power are still developing. Many problems such as cost-effectiveness and safety aspects of nuclear power are still causing much controversy. I hold the view that blindly opposing to new technology or superstitiously accepting nuclear power are not proper attitudes to tackle with the problem. What we should do now is to estimate in a pragmatic manner our demand for electricity from now to the 1990s and then right into the 21st century. After carefully setting a comprehensive long-term energy policy, we should then re-assess the feasibility of the Daya Bay nuclear power project and the role played by nuclear power in our energy policy. The above information should be made public as far as possible so that Hong Kong people can participate in the discussions.

- (2) The social price that has to be paid in participating in the nuclear power project. According to the present situation, if Hong Kong participates in the Daya Bay nuclear power project, apart from paying hundreds of millions of dollars as visible costs, we should also take into consideration the social price that has to be paid. Firstly, the Chernobyl disaster in the

Soviet Union has drawn the attention of Hong Kong people to the safety problem of the Daya Bay plant, and although the anxiety thus aroused has not led to a social disturbance, yet a strong phobia has gradually been formed which cannot be dispelled in a short period by publicity and education. Secondly, because of the close proximity of the Daya Bay plant to Hong Kong, in the absence of an absolute safe plan any accident occurring in the plant will pose serious threats to the lives and property of Hong Kong people. As politically Hong Kong is going through a sensitive transition period, we must make every effort to maintain social stability and economic prosperity. Thus we should have second thoughts on the social price which we may have to pay as mentioned above.

In view of the aforesaid factors, I suggest that the Government should consider the following points: (1) as a first step freeze Hong Kong's participation in the Daya Bay nuclear power project; (2) conduct a comprehensive review of the whole case as soon as possible, including our long-term demand for electricity and our energy policy, the role played by nuclear power in our energy programme and the feasibility of the Daya Bay project so as to determine whether Hong Kong should continue to participate in the scheme; and (3) make public the relevant information as far as possible so that the general public may refer to the information released and participate in the discussion.

Sir, the above are my remarks.

6.05 p.m.

HIS EXCELLENCY THE PRESIDENT: At this point, Council might like a short break.

6.15 p.m.

HIS EXCELLENCY THE PRESIDENT: Council resumes.

MR. LAI: Sir, there are of course many angles from which to look at the proposed nuclear plant at Daya Bay, but I shall limit myself to the examination of the economic aspect of the project and leave other issues to my esteemed colleagues.

The rationale behind the participation of Hong Kong Nuclear Investment Co. (HK NIC) in the project was professedly because of its positive economic contributions to Hong Kong. There are countless reasons, from Hong Kong's point of view, against the building of the nuclear plant, environmentally and safety-wise, but only one in favour—the contention that nuclear power is a more cost-effective option to handle the electricity demand of Hong Kong in the 1990s. If we cannot ascertain, beyond doubt, that this is in fact the case, then I see no reason why we should allow ourselves to be involved in the project at all.

According to China Light and Power's calculation, the electricity demand of Hong Kong will have grown beyond the service capability of its power stations by the early 1990s. The power to be purchased from Daya Bay will supplement this shortfall. And it is contended that it will be cheaper than conventionally generated power. How much is the saving?

China Light and Power provided us with the information that if the annual growth in electricity demand is 7 per cent (a conservative figure given that the average annual growth rate during the last 10 years was 10.1 per cent) the total demand will be 4 880 megawatts (MW) in 1993, the year the second generating unit at Daya Bay will be commissioned. The generating capacity of the Daya Bay Nuclear Plant when completed will be 1 800 MW; even if it operates constantly at 100 per cent capacity, (which is more inconceivable than a nuclear accident), the 70 per cent power to be sold to Hong Kong will be no more than 1260 MW, or slightly over a quarter of the total electricity demand. Unfortunately, we do not have figures for the price of nuclear generated power, but even assuming that the cost of nuclear generated power is 50 per cent cheaper than coal-fired electricity, the overall saving in the electricity bill will only be about 12 per cent, that figure will be even smaller if the difference between the costs of nuclear and coal-fired generated power is smaller than 50 per cent, or if the plant is working under capacity, or if the total electricity demand is greater than anticipated. Some people have already expressed willingness to pay for more expensive conventional electricity in exchange for the peace of mind of not being under the shadow of nuclear danger. Does that amount of saving alone justify our consent?

In the agreement between HK NIC and Guangdong Nuclear Investment Co., the cost of electricity to be purchased will be no higher than that of coal-fired electricity for the first *six years* of operation of the nuclear power station. But what about subsequent years? After the six-year period, any price increase due to escalation of costs foreseen or unexpected (e.g. interest rate fluctuations increasing the debt-servicing burden; implementation of additional safety measures), will be translated into higher electricity costs, perhaps higher than that of conventionally generated power. Hong Kong consumers will have no protection against such increases because by then Hong Kong will not have any readily available energy option but to purchase dearer electricity from Daya Bay since the development of alternative conventional plants will have been shelved in favour of the nuclear station. But if nuclear generated electricity is so certain a cheaper option, why will the guarantee only last six years and not the entire 20 years of the joint venture contract?

In fact it has been reported that coal-fired generation can be cheaper than nuclear power; the ratio of coal-fired cost to nuclear cost is 0.79:1 in some parts of western United States and 0.61:1 in some western Canadian regions. The source of information comes from Financial Times Energy Economist (June 1986 Issue 56, P.4).

What other economic benefits, except the possible saving in electricity cost, can the Daya Bay plant bring to Hong Kong?

Hong Kong has no nuclear industry, and will not develop one regardless of whether Daya Bay is built or not. Unlike France and Britain, there will not be any economic windfall for Hong Kong because of the construction of the plant. On the other hand, there may well be adverse ramifications if the plant is built.

Because China is not the most forthcoming of nations when it comes to revealing unfavourable news, there will always be a veil of secrecy around the project. The plant will be a fertile ground for breeding malicious rumours.

One of the reasons that Hong Kong has been a successful commercial centre is that she responds to information quickly; but the same responsiveness may also manifest itself as jittery reactions, as witnessed during the Sino-British negotiations on the future of Hong Kong. Because Hong Kong is vulnerable to rumours, the stability and prosperity of Hong Kong will be undermined if there is any news, genuine or not, of a malfunction of the plant circulating in Hong Kong. The erosion of confidence of investors in Hong Kong because of fear of a nuclear accident is something we cannot objectively assess but which we should not discount.

Some people say that the fear of the nuclear plant is irrational; that is beside the point. Rational or not this fear is real. Irrational fear brought the price of gold to over US\$800 in 1980; irrational fear, among other things, brought down the stock market from 1774.96 point Hang Seng Index in 1973 to 150.11 in 1974; irrational fear devaluated the Hong Kong Dollar close to HK\$10 to the US\$ in 1983. One must never underestimate the damage irrational fear can do.

So long as all assurances come only from experts with a vested interest, people will always be sceptical about the safety of the plant, and susceptible to rumours and irrational impulses. The prospect of stability and prosperity in Hong Kong is in no way enhanced by the plant. On the other hand, if a drain of investment should happen, it defeats the purpose of having the nuclear plant for there will no longer be a demand for its electricity.

Economically, I have reservations about the positive contributions the Daya Bay plant can make to Hong Kong while the negative effects are plain for all to see.

Today we are faced with a historic decision of whether to give our endorsement to the project. We can give it our full support, or in the extreme, we can pass legislation to forbid any nuclear energy purchase, thus forcing the Chinese to reconsider the burden of repayment of loans.

I understand the plant will be beneficial to China in her modernisation programmes; but if it jeopardises the stability and prosperity of Hong Kong, will it be worthwhile to push it ahead regardless? And people have expressed doubts and fears of the project. The question of 1997 is settling down nowadays, the new fear invoked by the Daya Bay plant may once again accelerate the flow of emigration and the brain drain.



In a survey done by my office, 80 per cent of the responses from the district board members in my constituency indicate that they either want to have further consultation before the plant is built (40 per cent), or have the plan scrapped altogether (40 per cent), and only 20 per cent agree to proceed with the project as planned. Of course I do not pretend this small sample is sufficient ground on which to base our decision, but it provides a glimpse of how people feel about the proposal. Moreover, 850 000 people (the estimated total may well go over the 1 million mark) have signed a petition calling for a halt to the project.

This is an era of public opinion. No government can ignore this clear voice of the public. It is granted China can still proceed with the project even if we decide to pull ourselves out; after all it is a Chinese station to be built on Chinese soil. But let us first exhaust all possible avenues through which we can change the course of the project, whether it be moving the plant to somewhere else, temporarily suspending the project until people are satisfied with its safety, or abandoning the plan altogether.

I propose that we should call for a postponement of the signing of the major contract so that more consultation, deliberation and investigation (including why other countries like Taiwan, the Philippines, Finland and so on have stopped their nuclear programmes) can be done in order to come to a prudent, judicious decision that is acceptable to all.

To conclude, Sir, may God grant us the serenity to accept things that cannot be changed, the courage to change things that should be changed, and the wisdom to tell the difference between the two.

DR. LAM (in Cantonese): Sir, although Legislative Councillors have different views on the construction of the Daya Bay nuclear power plant, I believe all of us have one common goal and that is the interest and benefit of the people of Hong Kong. I do not believe that there is a split between Legislative Councillors because of the Daya Bay problem as newspapers have reported. Just now we have seen Mr. Allen LEE agitatedly showing us a poster but I believe the situation whereby people start with quibble which then develops into a fight would certainly not happen in the Legislative Council.

Sir, in regard to the Daya Bay nuclear power project, our foremost consideration should be, 'what advantages and disadvantages can the Daya Bay nuclear power plant bring to Hong Kong'. Regrettably, up to the present moment, neither the Government nor the authorities concerned have made a comprehensive, objective and detailed analysis of the advantages and disadvantages that the Daya Bay plant may bring to Hong Kong and release the information to the public. Merely stressing the safety aspects of the plant or putting all responsibility for establishing the plant on the Chinese Government is not the best way to solve the problem. Moreover, the Director of the Nation

Nuclear Safety Bureau of China, Mr. JIANG Shingjie, had disclosed that when China placed orders to Britain for the purchase of equipment for the Daya Bay plant, one condition attached to the transaction was that Hong Kong should buy electricity from China. If what Mr. JIANG said is true, Hong Kong people may think that they have been made use of by the British and Hong Kong Governments in a secret deal because the selling agent will make a profit out of the transaction whereas the electricity bill will be settled by Hong Kong people, not the British or Hong Kong Governments.

Since the first nuclear power plant was set up in the Soviet Union in 1954, over 300 major and minor incidents had occurred in about 370 nuclear power plants all over the world. The main cause of the accidents is human error. Thus, there is no wonder that over 800 000 signatures have been collected in the campaign aimed at stopping the construction of the Daya Bay nuclear plant. Sir, I am happy to learn that representatives of over 800 teaching and general staff from the Hong Kong Chinese University, one of the highest academic institutions in the territory, have called at the Legislative Council two days ago to hand in their joint representation. The representatives of the Chinese University Tutors' Association and the Chinese University Staff Association presented their valuable views in an unemotional and objective manner. To all those Hong Kong people who are concerned about the Daya Bay nuclear power plant, I sincerely recommend you to read the above representation.

Sir, I earnestly request the Government to explain clearly to the public all problems caused by the Daya Bay nuclear plant project which may affect the people of Hong Kong such as safety, health, monitoring of the nuclear plant, electricity charge, environmental pollution, insurance and legal proceedings in relation to any accident occurring at the plant and whether nuclear power is the best source of energy supply for Hong Kong. Above all, before the Legislative Council fact-finding delegations on nuclear generation can release the results of their visits to the general public, the Government should urge the China Light and Power Co. Ltd. to defer signing the formal contracts of the project. If subsequently the general opinion is still against the construction of a nuclear power plant in Daya Bay, the Government should withdraw the approval given to China Light to buy electricity from China, refuse to act as a guarantor for loans secured by China Light and cancel the licence granted to the Guangdong Nuclear Investment Co. Ltd. One can satisfy one's hunger by either taking bread or rice but if the general public prefer rice to bread, should we force them to take bread against their will?

Sir, without the support of the general public, the stability and prosperity of Hong Kong can hardly be maintained.

Finally, I like to echo what Miss Maria TAM has said about the Japanese authority and the attitudes they have taken towards the development of nuclear energy. I would like to point out that the decision made by the Japanese authority may not necessarily be correct. There are two obvious examples,

firstly, the Pacific war; secondly, the alteration of the history of Japanese invasion of China.

Mr. Chairman, that is all I have to say.

MR. MARTIN LEE: Sir, the whole world is shocked by what happened at Chernobyl—for there what had been thought to be the unthinkable actually occurred. The government in every country with a nuclear energy programme is now re-assessing the question whether the benefits of nuclear energy justify its risks.

Hong Kong is no exception. More than 950 000 people have already signed in support of a plea that the Daya Bay nuclear power project be stopped immediately. But it has been suggested by some of my colleagues today that the people of Hong Kong are acting irrationally and that their conduct amounts to mass hysteria. And my colleagues are honourable men.

Let me analyse this matter rationally and coolly in this Chamber now and see whether these criticisms are well founded.

Before anyone can begin to look at any problem in depth, it is necessary to have the relevant information. But in spite of my numerous endeavours, such information is still denied to this Council and the public. May I respectfully remind the Financial Secretary of what his predecessor said during a recent question session in this Council on 7 May 1986: 'There is widespread concern and governments everywhere must be prepared to explain the position clearly so that there can be a proper degree of public reassurance. Secrecy is a menace. ... The Hong Kong Government must be open and be prepared to make all facts about Daya Bay transparent and open.' And in spite of those comforting words, the Hong Kong Government and the Guangdong Nuclear Power Joint Venture Co. are still trying to put the blame on each other for not releasing the 1981 feasibility study report to this Council. Thus instead of transparency and openness, we find that the relevant information is being kept under a solid containment, as strong as the one the French engineers say they will be constructing at Daya Bay. And if this containment of secrecy is not lifted forthwith, this Council must seriously consider exercising its newly acquired powers under section 9 of the Legislative Council (Powers and Privileges) Ordinance 1985 to compel the production of all relevant documents.

Soon, some of my colleagues will be going to Europe and America and try to gather information from some of the governments there. The public of Hong Kong wonders whether we have not got our priorities wrong for if our own government has denied and still denies to let Members of this Council have such important information relating to the Daya Bay plant, what reasonable prospects are there that the foreign governments will take us into their confidence and give us the information we need?

In the mean time and in the absence of any relevant information, the people of Hong Kong have been asked by their masters to believe on blind trust that the nuclear plant at Daya Bay is a safe one.

But even if we are to assume that the design of the plant is indeed safe, what about management? The management techniques in China have not, to say the least, attained to such international standards as would engender confidence in our hearts. And yet we know that even in such technologically advanced countries like the USA, United Kingdom, France and the USSR, accidents of one kind or another have occurred due to human error. The recent assurance given by the head of the National Nuclear Safety Department of the PRC that the Daya Bay nuclear plant is 100 per cent safe has generated more worries than confidence.

Thus, in the absence of relevant information, the people of Hong Kong can only look at the problem with their common sense:

- (1) They know there is no 100 per cent safe nuclear plant in this world.
- (2) They know that accidents cannot be ruled out in any nuclear plant, either due to faulty design, or lack of management or a combination of both.
- (3) They know there is no evacuation plan provided for Hong Kong by China.
- (4) They know also that in case of any major mishap, because of the proximity of the nuclear plant to Hong Kong, there is simply no possible escape for them.

In these circumstances, can anyone really blame the people of Hong Kong for fearing as they do? Are they being irrational or hysterical? Or rather, are not their critics being totally blind and insensitive?

Now it has been pointed out that this entire issue has been turned into a political question, thus bringing pressure to bear on the leaders of China: in that if they do not take heed of the deep concern of the millions of people in Hong Kong for their own safety now, it will reflect poorly on their willingness to listen to the same people on matters pertinent to the 1997 question. This is fair comment, for this question has indeed become a political one, like any other question which has attracted such wide public attention and concern. And whether one likes it or not, it will have an undoubted bearing on the confidence of the people of Hong Kong in the leaders of China, as is acknowledged even by pro-China magazines and newspapers. And it will be folly for any government to ignore such strong feelings from so many people. As to whether some people are trying to turn this issue to their political advantage, I suggest that it is no longer a relevant question to consider, because it must be obvious to all by now that the great majority of the people of Hong Kong do have a genuine fear for their lives, and that they have no political ambition whatsoever. Sir, their fears demand recognition by both the Chinese and the Hong Kong Governments.

What then is to be done with the Daya Bay project? May I venture to suggest the following:

Firstly, we must not rush ahead when the whole nuclear world has halted while waiting for more revelation on Chernobyl.

Secondly, the Hong Kong Government, the China Light and Power Co. Ltd. and the Hong Kong Nuclear Investment Co. cannot pretend that they have no responsibility to the people of Hong Kong over this scheme when they have taken a direct or indirect part in it.

Thirdly, it must be in China's interest to re-assess the economical viability of this scheme in the light of the tremendous fall in the cost of coal and natural gas.

Fourthly, many lessons will be learnt from Chernobyl. In the West, many nuclear experts now take the view that 'the reactor at Chernobyl was not so different from US and European designs as Western experts had originally assumed' (*Time Magazine* 2 June 1986). It may be that my learned colleague Mr. HO Sai-chu's quotation is a little out of date. Or as one US expert puts it: 'The message is not whether the Russian plant is as safe as ours ... The question is whether we understand our own reactors well enough. Did the Russians have something there that we have missed?' (*ibid.*)

Fifthly, just as many design changes have been made to nuclear reactors as a result of the accident at Three Mile Island, no doubt even more design changes will in the near future be made as a result of Chernobyl. It is therefore wise to wait, like the rest of the world.

For these reasons, I urge the relevant authorities to consider seriously another option which is open to them: that is, to build a conventional energy plant at the Daya Bay site by using coal or natural gas.

Sir, let it not be thought that the people of Hong Kong are trying to stop China's modernisation programmes; for there is nothing the people of Hong Kong want more than to see China continuing successfully with her present policy of modernisation. But we cannot help fearing for our lives and the lives of our children. For people everywhere are no longer talking about 1997; but they are talking about the possible loss of their lives well before that.

Sir, the most important single factor in the successful implementation of the 'one country two systems' policy is the confidence of the people of Hong Kong that there will be a future for them after 1997; and that confidence is being shaken to its very foundation by the thought that a nuclear plant may soon be operating so close to them, without an escape route in case of a major mishap.

Sir, now that the people of Hong Kong have expressed their views so openly and so clearly, I am confident that when their genuine fears and anxieties are accurately reflected to the leaders of China, they will take them into consideration by not going ahead with the original project.

MR. LIU (in Cantonese): Sir, all people in Hong Kong are deeply concerned about the problems relating to the construction of the nuclear power plant in Daya Bay and are particularly worried about their own safety. In my view, it is most important that we should assess the whole issue calmly. We should also make use of the calm-down period to collect information from various sources and make a reasonable decision on the basis of practicable scientific references. I therefore hope that all parties concerned will provide as much useful information as possible for the reference of the public. I understand that Government has already sent the Secretary for Economic Services to Britain and Europe to collect relevant information. I therefore hope that China and the Nuclear Plant Joint Venture Company will also take similar action to provide information on the actual circumstances so that members of the public can make a judgement on the basis of adequate scientific grounds and knowledge of the comprehensive operational management and contingency plans, and are thus relieved of their worries. It will not be of much use to refer to the views of just one or two experts, whether they are assuring safety or highlighting danger.

As a matter of fact, nuclear-generated electricity has been in use for a long time in many advanced countries and regions all over the world. Hence, we should not have undue fears simply because of the recent Chernobyl accident in USSR and object strongly to the construction of the nuclear power plant because of such an accidental negligence, thus deferring the development of modernisation. We should adopt an objective approach in order to respond and make a decision reasonably from a scientific point of view.

To generate electricity from nuclear power is basically an extremely abstruse and complicated matter. Hence, the opinions of any experts, including profound theories and technical terminology, cannot be easily understood by the general public, but will only deepen their perplexities. It is therefore really worth our careful consideration with regard to developing public education. On the one hand, the Guangdong Nuclear Power Joint Venture Co. Ltd. should spare no effort in publicising and explaining honestly and clearly to the general public their management skills which are the focus of worries. On the other hand, Hong Kong Government should also take corresponding measures with regard to education on nuclear generated electricity, e.g. to arrange effective publicity campaigns, organise exhibitions and make use of various methods which can explain the profound in simple terms so that the public may understand the facilities, management and technology involved in nuclear-generated electricity. It is believed that this will substantially assist in resolving the whole issue.

Nuclear power is a sensitive issue in many places. Over-reaction of the public is therefore unavoidable. I hope that China and the Hong Kong Government as well as the Nuclear Power Joint Venture Company Limited will take an enlightened and open approach towards such over-reaction, make full use of various channels such as district boards, the press and the general media to collect the views of the public and respond realistically and specifically. It is only

when the public are aware that all parties concerned are open-minded in handling this important issue rather than making arbitrary decisions and taking peremptory actions that they will feel relieved and Hong Kong's stability and prosperity will not be affected.

Although the information on Daya Bay nuclear power project obtained by this Council is limited, this Council is duty-bound to reflect the concern of the public. Strictly speaking, the Council should not interfere with the nuclear power plant investment project as it is an arrangement made by the investment companies themselves and not the business of Hong Kong Government. Nevertheless, as Hong Kong Government has undertaken to provide a commercial loan guarantee, it should have an insight into safety measures and effective contingency plans for the nuclear power plant before its construction. It is known that construction of nuclear power plants in Europe and the United States will not normally commence until after satisfactory contingency plans are formulated. But as sufficient information on such plans for the Daya Bay power plant is lacking, it is not surprising that the public are worried and frightened. Therefore, I hope Government will take remedial actions to relieve the public of their worries and fear.

Finally, I would like to call on the authorities concerned to establish effective communication channels with all people so that views of both parties can be exchanged, misunderstanding will not be deepened and both social and economic disturbances can be avoided. I would also suggest that Government should conduct a study via this Council with various associations concerned on the setting up of a committee or an ad hoc group to specially provide a bridge for effective exchange of public opinion and information on the nuclear power project so that a unanimous view which is also comprehensive and practical can be arrived at after complete information on the whole issue is made clear to all.

MR. NGAI (in Cantonese): Sir, I shall speak on both the economic and safety aspects of the Daya Bay nuclear power station.

From the economic point of view, the price of nuclear power is cheaper and more stable, and with its high degree of reliability, the economic value of nuclear power should by no means be under-rated or denied. Nuclear power has been used extensively in industrialised countries all over the world such as France, Japan, Switzerland, Sweden and Belgium, and the development of nuclear power technology has become a trend, a symbol of advancement, which is hard to arrest.

The survival and development of Hong Kong's commerce and industry rely very much on an uninterrupted supply of electricity and a stable electricity tariff, and the fluctuation in the prices of fuels for power generation directly affects the electricity charges we have to pay. Memories are still fresh concerning the high fuel surcharges on our electricity bills during the 1979 world oil crisis. Today, even though oil prices have dropped drastically while Hong Kong's

power companies have largely converted to coal-fired generation, we are still unable to free ourselves from the menace of fuel shortage or price fluctuations. Thus, in order to mitigate the devastating effect of this menace on the one hand, and to cope with the growth of electricity demand on the other, it might not be a wrong choice, in the long term, for Hong Kong to satisfy part of her electricity demand with nuclear power. Hong Kong will very surely benefit from the use of nuclear power in weighing the pros and cons of the proposed Daya Bay nuclear power project, therefore, we should under no circumstances neglect or deny its possible contribution to our economic prosperity.

However, despite the additional safeguard the Daya Bay nuclear power station can give to Hong Kong's electricity supply, I have certain reservations regarding a series of problems to this project. The reason is that the guarantee Hong Kong people can obtain as regards the safety aspect of the project remains too incomprehensive, obscure and unconvincing to put our mind at ease.

The disaster that happened in Chernobyl, USSR was a tragedy and an expensive experience for nuclear technology development. Here Hong Kong people begin to learn of the possible problems that could happen with nuclear power and their seriousness. Their reaction is, understandably, a mixture of repulsion, alarm and worry. The series of problems that arise revolve around:

- (1) How can the operation, management and maintenance of the Daya Bay nuclear power station be insulated from human errors?
- (2) What is the safety standard and reliability of the containment of the nuclear reactor?
- (3) How liable is Hong Kong to nuclear accidents and what contingency plans do we have?
- (4) Are there any concrete evidences to support statements such as 'Hong Kong should have absolute confidence regarding safety', 'There is no need for alarm', 'Contingency plans do not include Hong Kong because it will not be affected by any nuclear accidents', and 'Even if there were radioactive leakage, areas outside 10 km radius will not be affected' and so on? Obviously, judging from the latest developments, the arguments put forward by the experts can hardly mitigate our worries.

At this critical stage, I am glad to note that this Council has made the decision to send two fact-finding delegations to Europe and North America in search for more information and data on the safety of nuclear power. I fully support this decision. We are aware that in advanced countries, the erection of nuclear power stations amidst densely-populated regions is not uncommon. There should be sound reasons behind this and I would be surprised if there were not any good contingency measures to deal with the safety problem especially in the urban areas. I am confident that my colleagues entrusted with the mission shall bring back more objective and useful first-hand data to help us gain insight into the problem.



I think that the correct approach to the nuclear power issue should be rational and scientific, and problems should be analysed objectively and coolly. Otherwise, it might become either too one-sided or emotional. We should also avoid being blind followers of what most people say or think, or be political tools for conjuring up a situation where 'those who don't conform are not caring for the people'.

Ever since the invention of the power generator, human beings have been facing the problems of safety, pollution, and so on of power stations. Oil-fired, coal-fired, solar, hydro and nuclear power all have their advantages and disadvantages as well as potential hazards. The important thing is how to put these power stations under proper control and operation so as to minimise the probability and extent of accidents and to look for methods for tackling those accidents should they occur. I think this is what technological development is meant for.

Sir, I think that the worry of the Hong Kong people concerning the safety aspect of the Daya Bay project is not without basis. However, owing to the lack of sufficient information available to this Council, it is difficult to have a more comprehensive and in-depth analysis of the safety problem. I would now suggest:

- (1) that the Government disclose as soon as possible the feasibility study report and relevant information regarding the Daya Bay project for our reference and discussion;
- (2) that an educational campaign on 'understanding nuclear power' be launched urgently, using a more easily comprehensible language, to promote the knowledge of nuclear power among the mass and to alleviate their fear; and
- (3) that a round table committee be formed comprising Chinese Government representatives, Hong Kong representatives, and nuclear experts to draw up contingency measures.

It is through promotion, education and enrichment of knowledge that this Council and the Hong Kong people can better understand what is going on with the Daya Bay project, and even get rid of possibly unnecessary fears and worries. As regards whether the project should be shelved, moved or converted to coal-fired generation, I think these should be issues for the Chinese Government to decide internally.

MR. PANG (in Cantonese): Sir, if there were no freedom of the press in Hong Kong, no freedom of speech or freedom of expressing one's opinion, if the people of Hong Kong did not have the freedom to choose not to use certain daily necessities which may not be safe; and if the Hong Kong Government had not previously given financial guarantee or approved China Light and Power Co. Ltd. to participate and invest in the Daya Bay nuclear power project, this Council might not have the right to hold this adjournment debate today to

discuss an issue involving the construction of a nuclear power plant by China on Chinese soil.

There is widespread concern among the people of Hong Kong on the safety of the nuclear power station and whether there is any emergency evacuation plan in case of accidents. To express their concern Members of the Executive and Legislative Councils have formed two teams to visit USA and Europe respectively at the beginning of August to carry out on-the-spot study of safety measures taken by these countries on nuclear power. They will also find out the ultimate reasons why existing nuclear power plants in some countries have ceased operation, and why some completed plants or construction plans have been abandoned. But it is difficult to assess at this moment whether the visits would reveal anything that would dispel the doubts and fear Hong Kong people have towards nuclear power.

Sir, at the present stage, the Government should take great care to understand the feeling against nuclear power among the majority of the people of Hong Kong. For the issue will inevitably and certainly affect the maintenance of confidence of the local people and the stability and prosperity of our society.

I therefore earnestly suggest that the Government should, as soon as possible, advise the Hong Kong Nuclear Investment Company and the Guangdong Nuclear Power Joint Venture Company to postpone the signing of the formal contracts for the time being. Since it will take a rather long period of time for the Legislative Council fact-finding delegations, on their return, to collate, analyse and examine the materials collected, before a fair and balanced report can be produced, this Council may have to wait until the next session before it can evaluate the whole issue and draw a conclusion on it.

MR. POON CHI-FAI (in Cantonese): Sir, ever since an accident occurred at the Chernobyl Nuclear Power Station in Russia, safety aspects of the Daya Bay nuclear power plant in close proximity to Hong Kong have aroused a deep concern among all sectors of the community. The strong objection raised by Hong Kong people is understandable. In fact, departments concerned have all along been unable to relieve Hong Kong people of their worries while at the same time, the National Nuclear Safety Bureau in China have insisted strongly on-going ahead with the project as well as making it known that the contracts will be signed, equipment purchased and works commenced in a short time. Under such circumstances, how can Hong Kong people not deepen their worries?

Undeniably, it is a natural trend to increase the use of nuclear power for long-term development. Recent advances made in nuclear technology also showed that safety measures in today's nuclear power plants are more comprehensive and the risk of accidents in these power plants is small. However, judging from experience in nuclear development over the past decades, no nuclear station is absolutely safe and reliable. Let us take the Three Mile Island

and Chernobyl incidents as an example. We firmly believe that countries like the United States and Russia with their outstanding technological achievements would not have loosened their vigilance when dealing with the highly dangerous process of nuclear power generation. We also believe that the nuclear plants at Three Mile Island and Chernobyl were considered to be of the highest safety standard and absolutely safe in operation when they were being constructed. Unfortunately, accidents still struck. Although the Nuclear Power Joint Venture CO. pointed out that the impact caused by the Three Mile Island accident on the environment in its vicinity and the health of staff working in the power plant was insignificant and that radiation will not pose any threat to areas beyond 10 km even if an accident occurs in Daya Bay, the area affected by the Chernobyl accident extended as far as 140 km and the effect of radiation in some areas will last for as long as several decades. A nuclear engineer pointed out that in case of an accident at a nuclear plant, the extent of the affected area will be determined by the amount of radiation leakage and other factors and it is difficult to ascertain a safety boundary. To sum up, a number of Chinese and expatriate nuclear experts have already given their views and assurances regarding the Daya Bay nuclear project over the past month or so but their opinions showed vast discrepancies and some assurances are lacking in supportive data. Given this, it is difficult to decide who is in the right at this stage. Under these circumstances, we can hardly come to a conclusion on the safety aspects of the Daya Bay nuclear plant by simply referring to the information which we have obtained so far. It is for this reason that I would neither give approval nor disapproval indiscreetly with regard to the Daya Bay nuclear project. None the less, I think that works for the project should be shelved for the time being before the whole issue and its relevant facts are made clear to all. Temporary suspension of the works will definitely increase the costs. But to wait until the matter is made clear and the public's confidence is restored will help to relieve Hong Kong people's worries and reduce possible alteration to the designed safety measures after the commencement of the construction works.

Sir, I feel that the company concerned should promptly provide relevant data to support its safety guarantee in order to avoid public sentiments from growing beyond control. It is only by providing scientific evidence that the doubts of Hong Kong people can be removed. In addition, I support the idea of inviting professionals from local universities and polytechnics to attend explanatory sessions on the safety aspects of the nuclear plant. Government departments concerned should also try their best to collect more objective information for public announcement and, where possible, hire independent nuclear experts to analyse objectively the situation and submit a report to this Council as well as the general public. Such a report will be more reassuring and convincing than explanations provided either by the nuclear plant manufacturing company or anti-nuclear organisations.

PROF. POON: Sir, the Daya Bay issue has become a highly-charged issue, fraught with political connotations, economic implications, and emotive complications. But today, I will try my best to separate the scientific from the political, the economic and the emotive, and address myself to the scientific issues alone.

Contrary to the power plant in Chernobyl, which uses graphite, the plant in Daya Bay is a pressurised water reactor plant (PWR) and it is far from being a prototype. There are 34 units of the same type in France and, together with eight other larger nuclear power plants, they generate about 70 per cent of the country's power supply. The French view their nuclear power plants as a source of pride rather than a problem, which is understandable as there has never been an accident major or minor nor any release of radioactive material into the atmosphere.

The only major accident that involves the PWR type is the accident at Three Mile Island. Several reports have been written on the accident, the most objective and authoritative being the report by the President's Special Commission. The report highlighted several points:

- (i) The accident at Three Mile Island occurred as a result of a complex combination of minor equipment failures and major inappropriate human actions.
- (ii) In spite of the serious damage to the plant, most of the radiation was contained and the actual release of radioactive elements into the atmosphere had negligible effect on the physical health of individuals. The amount of radiation received by any one individual outside the plant was very low. It was reported that the accident resulted in no additional cancer deaths or, if there had been any, the incidences had been so low that it was impossible for them to be detected.
- (iii) The major health effect of the accident was found to be mental stress, but it was short-lived. The higher levels of distress were found among those living within five miles of Three Mile Island.
- (iv) Calculations showed that even if a melt-down occurred, there was a high probability that the containment building, and the hard rock on which the containment is built, would have been able to prevent the escape of a large amount of radioactivity into the atmosphere.

The report of the President's Commission, however, drew attention to a very crucial aspect in nuclear power generation, i.e., the human factor. It is important to recognise that the human beings who manage and operate the plants constitute an important safety system.

Coming back to an issue closer to home and closer to heart, at our meetings with the Guangdong Nuclear Plant Joint Venture CO. (GNPJVC), we were given to understand that the Daya Bay plant took account of human errors, in addition to equipment malfunctions, and improvements had been made in the interface between operator and machine, in the procedures used in the operation of the plant, and in the training of operators. I am very happy to know that the

Three Mile Island lesson has been taken note of, but details of how the interface functions to incorporate human errors are up to now still unavailable from the joint venture company.

After Chernobyl, the International Atomic Energy Authority (IAEA) concluded that 'from the information received on the Chernobyl accident, it does not appear that new physical phenomena important to safety have been identified that would require action on other types of nuclear power plants.' Representatives of the joint venture company said that the plant was designed with extensive protection against various serious accidents, including a core melt-down. The secondary containment was constructed to contain the highest pressure that could be reached in the case of the most severe accident, thereby ensuring that there would be no significant radioactive release, necessitating no evacuation beyond a 10 km radius. However, there are up to now no facts or figures to support this conclusion. Indeed, in the case of the most severe accident, what will be the pressure? What will be the temperature? What are the supportive arguments to justify that the outermost containment will remain intact? If indeed there should be a leak, what are the source terms, i.e, the amount of radioactive materials released into the atmosphere? What will be the radiation dose on a location 10 km away, 30 km or 50 km away? Before reaching the above conclusions, I was given to understand that the joint venture company had undertaken severe accident analyses. What are the technical reports of these analyses? What are the major assumptions? Only with more scientific and technical data can I commit myself to pronouncing whether Hong Kong is safe, or otherwise. Right now, I am in no position to do so.

There has been so much talk and unhappiness surrounding the Daya Bay issue, especially these past few days that it has become virtually impossible to look at the issue from an objective point of view. The whole issue, in actuality, boils down to something simple, yet understandably overwhelming. The general panic of Hong Kong people is built on a vague concept that Hong Kong will become a 'dead city' in the event of an accident at Daya Bay. Rectification of this misapprehension, therefore, has to resort to data from technical analysis. A comparison of these data with those of the International Commission on Radiological Protection will show whether Hong Kong is safe or unsafe, whether Hong Kong will become a 'dead city' overnight.

I hope that our fact-finding delegations can obtain first hand information on various aspects related to the plant: the engineers, operators, technicians, the inhabitants nearby, and so on. In France, England, USA, Canada, Japan and Taiwan, people do live within 10-15 km of a nuclear power plant and their experience and insight should prove useful in our evaluation of Daya Bay.

There are indications that in about 50 years' time sources of fossil fuel will be depleted to the extent that it will be difficult, if not impossible, for them to meet our demands. Resorting to new energy sources is therefore a must. Will solar energy be well developed by then to take the place of fossil fuel? If objective,

analytical results prove nuclear energy to be sufficiently safe, should it be objected on emotional grounds?

Before I end my speech today, I would like to bring up one further point for the consideration of my fellow hon. colleagues: New nuclear power designs are being drawn up. The question therefore is this: is it more advisable to depend on a well-tested design that has been in use and hence improved with built-in safeguards automatic backups or to depend on a totally new, untested approach?

MR. SZETO (in Cantonese): Sir, with diligence and intelligence, and more than a century's sweating effort, Hong Kong has established itself as a prosperous, stable and prestigious international city.

Through the spirit of mutual tolerance and understanding, the historical Gordian knot resulting from barbaric invasion and national disgrace was finally united.

The Basic Law, which is full of beautiful visions and directed at the untried for goal of 'one state, two systems', is also being drafted:—it is a thing which has never been attempted before by our predecessors and is still to be realised.

Confidence is now recovering; our future generations have to continue to live here, to work here diligently, to make full use of their intelligence and to show off their capabilities.

But all these will be shaken by the construction of the Daya Bay nuclear power plant, or even disappear within an instant once Hong Kong becomes polluted by radiation. If this happens, there will be no more unpolluted sunshine, clean air, unpolluted rain and dew, or vitality of life.

We are all human beings, not gods. No one can offer a 100 per cent assurance that there will be no risk of any accident occurring. An accident means something unanticipated; if it could be anticipated and guaranteed not to happen, then it would not be an accident. Accidents cannot take place in blueprints; otherwise, the blueprints will not be produced. But human factors could be a cause of accident at any time. We are all human beings, not gods.

We could accept or tolerate an accident which only involves one person, several persons, a few dozen people, a few hundred people, or even a few thousand people. But for an irreparable and destructive disaster involving a few million people for generations, nobody is qualified to say that it is possible to take the risk of such an accident, or to say that this is something acceptable and tolerable.

This is not our only alternative. We have nothing to say if this is the only way out. Are we being placed in a situation without alternatives? Cannot our few million people continue to live without nuclear-generated electricity? Why must we place all our stakes on a single bet?

We have no power to decide whether a nuclear plant should be built in places outside Hong Kong or where it should be built. But the people of Hong Kong have the right to express their fears and anxieties. As Legislative Councillors, we are all the more obliged to reflect their fears and anxieties, which are objective realities that truly exist, and definitely not some man-made accident.

Let us hope that Hong Kong will ever remain a place with plentiful sunshine, irrigating rains and fresh clean air; full of vitality, prosperity, stability and happiness. We must strive for them!

MR. HUI (in Cantonese): Sir, when the disastrous explosion occurred on 26 April 1986 at Chernobyl nuclear power plant in the remote Soviet Union, Hong Kong, site people were conducting their daily business as usual. Although there were no radioactive clouds drifting in the sky above Hong Kong, the incident, however, reminded the local residents that in Daya Bay, 50 km from Hong Kong, site formation work was in progress for the construction of a nuclear plant that would have two reactors.

*Safety considerations of nuclear power plant*

Before the Chernobyl accident, I believe not too many people knew where Daya Bay was and what relation it had with Hong Kong. However, in recent months, the words 'Daya Bay' have appeared almost daily in the newspapers. It is not because Daya Bay has become a new tourist attraction that enables it to capture the attention of the media. On the contrary, to the people of Hong Kong, the words 'Daya Bay' denote nuclear radiation hazard, for it is feared that should an accident occur after the completion of the Daya Bay nuclear power plant, it would lead to an explosion similar to the Chernobyl incident.

The Guangdong Nuclear Power Joint Venture CO. Ltd. (GNPJVC) which has full confidence in the safety facility of the Daya Bay plant keeps on telling us that the pressurised water reactor used in the Daya Bay plant is completely different from the RBMK type reactor used in the Soviet plant at which the accident occurred, and that the former is technologically more advanced and complies with higher safety standards. But these verbal assurances fail to dispel our worries.

The Hong Kong Government appointed the Harwell laboratory as consultants to study the probabilities of nuclear accidents and to make assessment on the technical aspects. The assignment will not be completed until July 1987. On the other hand, the feasibility study report on the nuclear plant of the Guangdong Nuclear Power CO. (GNPC) cannot be released since the report is not owned by the Hong Kong Government. Under these circumstances, how can the authorities concerned still guarantee safety with full confidence?

Furthermore, when the Legislative Council considered the safety aspects of the Daya Bay nuclear plant in 1985, the study was conducted in the light that the nuclear plant would use French designed model and the National Nuclear

Safety Bureau was set up with French assistance. But Mr. ZHAN Yun-long, General Manager of GNPJVC said that the National Nuclear Safety Bureau would not be able to complete the basic laws on atomic energy within two years and the drawing up of the safety standards for the Daya Bay nuclear plant for which Mr. ZHAN was responsible could only be completed a few years later.

From the above, we can see that assurances on the safety measures of the Daya Bay nuclear plant are based on some safety plans which have not yet been formulated. Should public confidence be built on these plans which are still under study and not yet been established? However, the main contracts of the Daya Bay nuclear power project will be signed in October 1986, i.e. before any detailed safety measures are devised.

What worry people most are mistakes caused by human failure. Even nuclear specialists cannot guarantee 100 per cent safety of nuclear plants because any equipment is liable to accidents due to human errors in operation. We all know that professional training in the operation and management of equipment is of utmost importance but it takes time to achieve good results.

What makes nuclear accidents so horrible is that it will not only cause injuries and death but radiation will spread to neighbouring areas and the damage so caused can only be reduced after a very long time.

As Hong Kong is located 50 km from Daya Bay, there are worries about its safety. A Chinese official, however, remarked that as Hong Kong was not within the 10 km radius zone around the nuclear plant, there was no need for any evacuation plans. Even if a nuclear accident occurred, the affected area would be limited to the 10 km zone from the plant.

The public are given such verbal assurances but what happens in real life is something completely different. After the Soviet nuclear accident, the radiation level of USSR's neighbour, Poland, was some 10 times higher than usual. The radiation level detected in Denmark which is 2 200 km away from Chernobyl, has also increased. The people of Hong Kong were even worried that foodstuff imported from Europe would be contaminated. Such information reflects that the guarantee of safety outside the 10 km zone only implies that there will not be any immediate effects, e.g. death upon radiation, but long-term environmental damage is inevitable.

The signature campaign to stop the Daya Bay nuclear power project has collected 700 000 signatures which is a manifestation of widespread public concern. Those who signed may not understand the operation procedures of the plant. I believe not all of my fellow hon. colleagues who speak on this topic today fully understand the facilities and equipment of the plant. What we can rely on is our Government who will make the decision for us.



*Economic factor*

In the early 1980s, the Hong Kong Government raised no objection to Hong Kong's participation in the nuclear power project on the ground that electricity generated by nuclear power was cheaper than that generated by coal. In November 1983, the Secretary for Economic Services said that if the commercial conditions of the project were resolved, the Hong Kong Government would support Hong Kong's participation in the project. I hope the Government will inform this Council whether the so called commercial conditions include the buying of General Electric CO.'s products from Britain by the Daya Bay nuclear plant?

Economic factor was the main consideration in deciding the building of the Daya Bay nuclear plant. In 1981, crude oil price had once escalated to US\$40 a barrel, and coal price also soared up correspondingly. It is understandable that electric companies had to explore cheap generating methods. Furthermore, China was anxious to implement her four modernisation programmes. Under such circumstances, the Nuclear Power Joint Venture CO. was set up by several China and Hong Kong companies.

Today, crude oil price has decreased to around US\$10 a barrel, and the nuclear plant's function of providing cheap electricity is subsequently reduced. People begin to doubt if it is economical to spend US\$35 billion on a nuclear plant which has no safety guarantee. The oil price may soar up again when the Daya Bay nuclear plant starts operation and it may well serve as a timely facility to generate cheap electricity. However, we must note that the public seem to be not too grateful for the provision of cheap electric charges. What they emphasise time and again is 'safety'.

If the word 'tranquillity' is worth 1 000 taels of gold, then 'safety' will be priced at 10 000 taels to the people of Hong Kong who do not mind paying higher charges in return for safer generating facilities.

*Legislative Council fact-finding delegation on nuclear generation*

The Legislative Council plans to send fact-finding delegations to study the facilities and safety standard of overseas nuclear plants. I hope the delegations will achieve satisfactory results. By this, I do not mean the delegations' report but the genuine sincerity of the British and Chinese Governments and relevant organisations to study the report in full and make sagacious decision—even if the decision decides shelving the Daya Bay nuclear project.

After the Soviet nuclear accident, many European countries, Holland, Belgium, Austria, Finland and so on, have cancelled or shelved their nuclear power projects. Even our neighbours, Taiwan and the Philippines, act likewise. The Philippines has even abandoned her new nuclear plant which is worth US\$27 billion.

I believe even if no nuclear plant is to be built at Daya Bay, the developed land will not be wasted. China Light and Power CO. Ltd. and the Chinese Government can consider developing a normal coal-fired generating plant on the same site.

During the same period last year, many of my fellow hon. colleagues now present, as well as myself, were actively engaging in the preparation work for the first election of the Legislative Council. We all put in our efforts to strive for the implementation of a representative and more open government. The election day, by coincidence, was the first anniversary of the signing of the Sino-British agreement. The agreement is a compromise reached by the two governments on the future of Hong Kong and is acceptable to the Hong Kong people. It lays the foundation for the preservation of prosperity and stability of Hong Kong. I hope this foundation as well as all the endeavours of my fellow hon. colleagues will not be shattered by the confidence crisis triggered off by the Daya Bay incident.

The public continue to air their views on the Daya Bay project. The incident is a touchstone to test whether Hong Kong will have a real open government as well as the Chinese Government's attitude towards maintaining Hong Kong's prosperity and stability. We cannot, under any circumstances, allow a nuclear plant to ruin Hong Kong's future. With all sincerity, I earnestly appeal to the authorities concerned to consider the matter carefully and make a sagacious decision.

MR. TAM (in Cantonese): Sir, in the past month or so, various aspects of the Daya Bay nuclear power plant have caused widespread public concern in Hong Kong. Public anxiety over its safety is especially noticeable as it is a project which may affect their lives, their properties and their descendants. Such concern and anxiety are perfectly understandable and their views and requests should be given due consideration.

It was the Chernobyl incident in the Soviet Union which triggered off public anxiety in Hong Kong over the safety of the Daya Bay project. However, it is noted that in 1983, when Government gave its approval for China Light and Power CO. to participate in the Daya Bay nuclear power project, no attempts were made to explain the matter to the public, such as Government deliberations on the economic and safety implications of the project. Furthermore, there was no active consultation to collect public opinions. These are also important contributory factors to the development of apprehension among the general public.

For some time now, extensive discussions have been going on in the community on the subject of Daya Bay, much of which without the benefit of solid information, data or analysis. The formulation of any views, whether for or against the project, under such circumstances will not help to ease public anxiety over safety, nor will it help people to reach a rational judgement. For

this reason, I think that the prerequisite for coming to a conclusive opinion is to conduct rational discussion based on adequate information.

From what I know, Government has commissioned United Kingdom consultants to conduct several studies in relation to the Daya Bay nuclear power plant, namely, a radiation monitoring programme, an assessment of the probability of accidents at the nuclear power station and the consequences for Hong Kong, the design of a contingency plan, training programme for Government officers, and a public education programme. The studies on a radiation monitoring programme and a public education programme have been completed but the two other more crucial studies are yet to be concluded. Government should ask the consultants to expedite the studies and should make public the completed reports. On the other hand, several studies are also being conducted by the Guangdong Nuclear Power Joint Venture CO., and some of these have already been completed. Among them are a feasibility study on the Daya Bay project, a preliminary safety analysis report, and an environmental impact report. These reports are equally important for a full understanding of the facts about the project and the Government should approach the parties concerned for their release.

Sir, only through open, full and serious discussion of these reports, may the anxiety felt by the people of Hong Kong over the safety of the Daya Bay project be removed. Finally, I hope that both the British and Chinese sides would pay due regard to the concern and anxiety of the people of Hong Kong over the safety of the nuclear power plant and exercise the utmost care in handling matters relating to its construction.

DR. TSE (in Cantonese): Sir, I am indeed worried about the agitation which has recently been caused in Hong Kong by the construction of the Daya Bay nuclear power plant because opinions expressed and actions advocated by some local people and overseas visitors in relation to the matter has aroused irrational fears on the part of some members of the public. It is only natural for us to care for the safety of the individual as well as that of the society. However, when care has erroneously been led into fear, it is incumbent upon us appointed or elected Legislative Council Members to keep abreast of the objective situation and relevant information as far as possible and then report and analyse with a calm and unsuspecting approach so that the public can calm down and respond to the matter in a reasonable way.

Judging from the present trend, the question of nuclear power generation in Daya Bay has changed from considerations of technological safety and economic effects to a political movement against nuclear power. Naturally, the standpoint of anti-nuclear organisation is supported by expert theories. In fact, people in a utopia do not wish to use out of necessity nuclear generated electricity as well as nuclear weapons, nor even radioactive medical equipment. But we are not living in a perfect world. In order to prevent sudden nuclear

attacks by other countries, some countries find it necessary to have nuclear weapons which can be readily employed for the purpose of counter-attack and overpowering their enemies. Similarly, in view of the scarcity of fossil fuels, and their political and geographical distribution, many European countries have already shifted, either completely or partially, to the development of nuclear power in order to free themselves from restrictions imposed by the supply of energy resources. As some of them are also small territories with a dense population, they should therefore give careful consideration to the safety problems. The decision they made after weighing the pros and cons proves that nuclear power generation is not necessarily a risk which, according to extremists of the anti-nuclear movement, is absolutely unacceptable.

It is understandable that many people have greater worries over the risk factor of nuclear power plants after the Chernobyl accident. However, the Daya Bay nuclear power plant should not in any case be compared to the one in Chernobyl since the former will adopt a design which has been internationally used on an extensive basis while the latter used the most outdated equipment in USSR and its safety standards and operation were rarely revealed to outsiders, let alone international assessments. Hence, it is unfair to make a comparison between the two when considering the damage caused by accidents. It is deliberately misleading and exaggerating simply for the sake of raising an alarm to take the nuclear power plant as a nuclear bomb with equal strength when considering its impact on Hong Kong upon explosion.

For this reason, I wish to call on members of the public to keep calm in dealing with the Daya Bay nuclear project issue. The manufacturer presently claims that according to standards set by the French Government, a nuclear plant is deemed to have failed to meet the requirements and its application for an operation permit will be rejected if, in case of an accident, residents outside its 10-km perimeter have to be evacuated as a result of radiation. I think we should seriously study into the tests and data with which the manufacturer proves that his product meets the standards set by the French Government and how the authorities concerned can guarantee that all construction work of the Daya Bay nuclear plant and its subsequent management and monitoring system can assure that its future operation fulfills requirements laid down in the operation permit at any one time. We understand that no fortification front can be extended beyond its weakest point just as a leaking pipe in a flat is normally the result of substandard workmanship in its connection rather than a matter of its thickness.

I am glad that this Council has decided to form two fact-finding delegations to Europe and USA to thoroughly enquire into the views and feelings of local residents and governments on the safety aspects of nuclear power plants which are in close proximity to densely populated areas. Since I will be on vacation in the States in August, I am glad to spare a few days to assist in the work of the delegation. I would also like to call on the authorities concerned to set the public's minds at ease and enhance their confidence by declining to sign any

contract that will leave Hong Kong people without any choice at all before this Council finalises its investigation report.

MR. ANDREW WONG (in Cantonese): Sir, regarding the Daya Bay nuclear project, many people, including its supporters and opposers, have recently become experts overnight. I am also a little bit enraptured and believe that I am really an expert after going over a number of papers, attending a number of briefings and holding a number of discussions with others.

I am not an expert. I know nothing at all about principles of generation of electricity by nuclear fission, different signs of reactors, dangers of radiation, safety standards, demand for electricity, power supply network and economic benefits and so on. But I know two things and I believe you will also agree to them: First, people have the common sense to make judgement even if they are not experts. Otherwise how can we put the legislative and executive powers in the hands of a group of people who are not simultaneously nuclear power experts, medical experts, engineering experts, economic experts, political experts and legal experts and so on? We might as well dispense with the all-round executives. It is not even necessary to develop representative government. Hong Kong may simply be ruled by the experts. Second, it is necessary to make decisions, and make them immediately in case of emergency, even without adequate common sense and power of judgement. Not only is it necessary for officials and councillors to make decisions, the so-called indiscriminate people (who may be sharp-sighted) also have to make decisions. Similarly, it is necessary for an ignorant person who falls sick to see the doctor and decide on what kind of doctor and which doctor to consult, and whether he should consult a doctor of a Government hospital or one in private practice. If the doctor advises him to undergo an operation, once again he has to decide whether he should take his advice or go and see another doctor. Even if he agrees to undergo an operation, he still has to decide on the kind of hospital to which he should be admitted, a Government hospital or a private hospital, of what class the hospital bed should be: first, second or third class and so on. The Daya Bay Nuclear Power Joint Venture Co. will formally sign a contract with the French nuclear power manufacturer Framatome in September or October. The current session of the Legislative Council will end at the end of July and the next session will start in October. Hence, when I am writing this speech now which is just before midnight (about 11 o'clock), every member of the public, as well as the Legislative Council Members who are even more duty-bound, should make a decision, whether or not they have sufficient data, because arguments are always more important than data. I would like to propose hereby the following analysis and judgement by common sense. Let me start with common sense economics, Mrs. Rosanna TAM mentioned a similar point.

The first question we have to ask is whether the power supply in Hong Kong will be insufficient to meet the demand in the early 1990s. If we don't have sufficient supply, then we have to proceed to the second point. But the CLP says

it won't be enough. The Government says it won't be enough. But both Mr. Walter C. PATTERSON of Friends of the Earth and the Conservancy Association in Hong Kong said that following the commencement of operation of the B Plant in Castle Peak, the power supply will be sufficient by the early 1990s. Their deductions were based on published data from China Light & Power Co. But both China Light and the Government have not published any new data and projections again. May be the conclusion drawn by China Light and the Government is correct because they are not referring to the early '90s, but rather the whole decade. All right, if we don't have enough electricity, then what next? But how can we solve the problem of insufficient power supply? To buy or generate electricity from China? To buy nuclear generated electricity or oil/coal-fired electricity if we have decided to buy? This is just like deciding whether to undergo an operation or to take medicine. The doctor says that it will be a major operation and that I have to be admitted to the hospital and stay in a hospital bed in the first class ward. So I have to make a decision again. The Government has not objected to the purchase of electricity by CLP from China, nuclear in nature, and the reason is that having conducted feasibility studies, nuclear plant seems to be cheaper, but the arguments and the premises behind the data have never been disclosed to the public. Even though we have several meetings, we haven't got that information.

According to the information provided by Government, the construction cost of the Daya Bay nuclear power plant with a capacity of 1 800 MW is over \$27,000 million; it is this information that perhaps can be disclosed to the public, while that of a coal-fired electricity plant with equal capacity is about \$17,000 million, making a difference of over \$10,000 million. I would like to make a point similar to the one made by Mr. Richard LAI; Mr. CHAM and Mr. NGAI have spoken quite differently. Of course, I know that the fuel cost of nuclear power is cheaper than that of coal-fired electricity. Therefore, computing on a comprehensive basis, nuclear power is still cheaper than coal-fired electricity. But how much cheaper? Mr. CHAM gave us some figures. He said that as far as the cost concerned for coal, the fuel accounts for 60 per cent of the cost but as far as CLP is concerned, the figure is 50 per cent. There we have discrepancies in the figures. According to the Director of China Light & Power Co., Mr. S.K.L. POON, each unit of electricity will be 5.6¢ cheaper, which is about three times less than the original estimate. But I'm not sure about that. In the end it may be more expensive than coal-fired electricity. The above figure may not be final because the construction cost may be higher than \$27,000 million as a result of delay in engineering work. For instance, even if you build the Sha Tin Central Park, as a result of delays, costs more. Another point is about safety. The higher are expectations of safety standards, the higher the cost will be in the end. From our experience in local engineering work projects and overseas nuclear plants, it is absolutely likely that the construction cost will go beyond the estimates. The production of nuclear fuel uranium 235 is completely controlled by commercial monopolies in the US. When the price of coal and oil

goes up, the cost of fuel will naturally be increased too. Furthermore, according to experts computation, when the price of coal and oil remains high, nuclear generated electricity will not be cheap than oil or coal-fired electricity unless the production rate is more than 50 per cent and will only be definitely cheap if the production is 80 per cent. So my third point is if minor accidents frequently occur in the Daya Bay nuclear power plant, making a production rate of 50 per cent or higher impossible, nuclear generated electricity may be even more expensive than coal-fired electricity. Moreover, the cost of nuclear power does not include insurance, monitoring fees and evacuation expenses which are incurred as and when necessary. All such costs have to be covered by Hong Kong tax-payers' money. The cost of nuclear power also does not cover the expenses for disposal of the nuclear waste. It is believed that China will take up this responsibility. However, it is also believed that China will include such expenses in the cost and reflect it in the selling price. I think there is no need for me to further mention the closure fee required when the plant ceases to be in operation as a result of accidents or after 30 or 40 years of operation. Sir, you will probably agree that this common sense economic analysis is by no means exaggerated and would therefore re-consider whether we should take part in the construction of the nuclear power plant.

As to arrangements for buying electricity, I am rather puzzled by the information supplied by Government. The joint venture company comprises the Guangdong Nuclear Investment Co. (GNIC) and the Hong Kong Nuclear Investment Co. (HKNIC). The former provides for 75 per cent of the investment while the latter 25 per cent. 75 per cent of the output will go to Guangdong while the remaining 25 per cent will go to Hong Kong. Hong Kong will buy 45 per cent more from Guangdong out of the 75 per cent. In other words, Hong Kong will consume a total of 70 per cent of the output. The tenure of joint venture will last for 20 years. Hong Kong has the right to extend the tenure for five more years. During the first five years, the price of nuclear generated electricity will either be the production cost plus profits or the nominal price of coal-fired electricity based on a formula mutually agreed between the two parties beforehand, whichever is the less. It appears to be fairly reasonable. Yet there are several problems. Firstly, what will the profit be? I have heard that the profit margin has been agreed by both parties, but what exactly is the size? Secondly, is the formula for calculating the nominal price of coal-fired electricity logical? Is it entirely reasonable? It is said it's already in the contract but I haven't seen it. Thirdly, will the price of nuclear generated electricity be arbitrarily fixed by the joint venture company whose major shareholder is GNIC at its own discretion after five years? Information on and answers to all these questions are still unavailable. Another arrangement which puzzles me concerns the amount of electricity to be purchased. Is Hong Kong required to purchase 70 per cent of total output under the contract or only 25 per cent which it has originally undertaken to buy plus an additional 45 per cent to be purchased from Guangdong? There is a big difference between the two because

according to the contract, Hong Kong is not required to buy 70 per cent annually during the first seven years. It seems that it has to buy 70 per cent during the first year. If the amount of consumption is less than the estimated amount in the first year, the amount to be purchased in the second year can be reduced to half the amount of consumption and estimated consumption. But will it be reduced by half of 70 per cent (supposing no electricity is used in the first year) i.e. 35 per cent, or half of 45 per cent (supposing no electricity is used in the first year) i.e. 47.5 per cent (25 per cent + 22.5 per cent)? The joint venture and off-take contract was signed with the approval of the Governor in Council in early 1985. But so far, I have not yet seen this contract. In my view, Government has the responsibility to clarify the above points of doubts even if it is impossible to publish the contract. Now that things have changed, the Government should also re-consider whether the project is cost-effective and whether it is uneconomical to compensate China Light & Power Co. Ltd. when it complies with the request to withdraw from the project. If it is found after re-consideration that nuclear generation has more disadvantages than advantages, will consideration be given to asking either China Light & Power Co. or the United Kingdom Government to persuade the Chinese authorities to re-consider the whole issue of Daya Bay nuclear project.

Sir, please spare me several minutes and let me give some data which can perhaps be used to convince the Chinese authorities. Firstly, the arguments on the relative costs between nuclear-generated and oil or coal-fired electricity which I have just mentioned is applicable both to Hong Kong and China. China is one of the countries which is rich in coal. China, USA and USSR together possess 90 per cent of the world's coal reserves. Moreover, the output in South Sea oilfield is expected to be fairly abundant when it goes into production. Hence, to generate electricity with coal or oil accords with the principle of self-sufficiency as the fuel supply is under its own control. Secondly, according to a study report entitled 'China's Energy Resources in the Year 2000', China's hydroelectricity potential tops the world but only 7 per cent of its capacity is developed. Compared with 17 per cent in India and 67 per cent in Japan, its development falls far behind. We only need to raise these points to China and the order of priority for nuclear-generated, oil and coal-fired electricity as well as hydroelectricity will be obvious.

Sir, I would therefore call on the Hong Kong and Chinese Governments to re-consider the Daya Bay nuclear project and temporarily defer signing the contract with Framatome of France.

Finally, Sir, please allow me to make a suggestion. No matter whether the Daya Bay nuclear plant is built according to schedule or the project is shelved for the time being, it is an obligation for this Council to express a positive concern to the issues of electricity supply and nuclear energy as well as to voluntarily take up a monitoring role. Therefore, I suggest that a standing *ad hoc* committee formed by Members of this Council should be set up to monitor all



policies and problems concerning electricity supply within the local Government and this Council's jurisdiction by way of public meeting and hearing of evidence. As this standing *ad hoc* committee is a supervisory body under this Council, Government officials and Executive Council members should be excluded from its membership so that the committee can be fair and just in form and spirit.

FINANCIAL SECRETARY: Sir, the events at Chernobyl in April have had a profound effect on the attitude of people towards the use of nuclear power for civil purposes. Decisions that before seemed relatively clear-cut have now become far more difficult. Programmes for the development of nuclear power stations have come under scrutiny in many places. As Mr. S. L. CHEN has said, Hong Kong is not alone.

In looking at the Daya Bay project today we must ask ourselves what has changed as a result of Chernobyl. The answer is certainly not safety standards. For those who are continuing with their nuclear power programmes, safety standards will be higher than ever. What has changed is, of course, the degree of public anxiety about nuclear power.

The dilemma in Hong Kong is particularly complex for a number of reasons. *First*, the proposed power station at Daya Bay is not being built in Hong Kong *Second* is the fact that Hong Kong Nuclear Investment Co. Ltd. and its parent, China Light & Power Co. Ltd., have contracted to buy electricity generated at Daya Bay. And the contracts, the offtake arrangements, were entered into with the knowledge and agreement of the Government. More of this in a moment. Lastly, as Miss Maria TAM and Mr. Hilton CHEONG-LEEN have said, at the time the joint venture agreement was announced there was a clear understanding of its importance, and in most quarters support for this tangible evidence of co-operation between all the parties concerned. It augured well for the future.

Sir, this adjournment debate is undoubtedly the most appropriate method of voicing concern over this matter, which is of such great importance to the people of Hong Kong. Members of this Council have spoken with courage and sincerity. Many have acknowledged the complexity of the issues. I hope, Sir, that Members will forgive me if I do not specifically acknowledge all the important points they have made, but the hour is late, and I shall try to deal with the major general issues. In answering on behalf of the Administration I propose to give a brief account of the background and explain the Government's involvement in the project and its relationship with the parties. This I must do because I have noticed that many commentators have expressed the view that the Government should take various steps which are not in our power to take. It is important that there should be a clear understanding of what we can and cannot do. To urge that as a government we adopt a particular course of action that is not truly open to us is unproductive, to say the least. Any action that we take must, of course, be affected by the realities of the situation. At the end of the day the decision to build this power station is not one for Hong Kong.

The Daya Bay project originated in a joint feasibility study carried out by the Guangdong Power Company and China Light & Power Co. Ltd. Although the Government was not directly involved, China Light & Power has asked whether there was any objection to their entering into this feasibility study back in 1979. It was decided that there was no objection. The decision to participate in the project itself depended, of course, on the outcome of the feasibility study.

When the feasibility study was presented to the Government it was clear that a very thorough examination of the project including the suitability of various sites had been carried out. As to the site itself, the study team was assisted by the United Kingdom Atomic Energy Authority and the Central Electricity Generating Board of the United Kingdom. It was only after a close and detailed examination of the geological, seismic and meteorological aspects had been carried out that the present site at Daya Bay was chosen. I might add that the study was guided by site selection standards used by the United States Atomic Energy Commission.

The distance of the site from Hong Kong is, of course, of fundamental importance in the context of safety. Distance is the first line of defence in the event of any accident or mishap. Much has been said regarding the closeness of Daya Bay to Hong Kong. In accepting the feasibility study and ultimately in agreeing to the Hong Kong Nuclear Investment Co. entering into the joint venture, we took account of internationally accepted standards in relation to the distance between a power station and large centres of population. Compared with many power stations, Daya Bay is not close to Hong Kong. For example, there is a nuclear power station in Belgium only 12 km from Antwerp. The Gravelines power station in France with its six reactors is merely 34 km from the well populated south-east coast of England. Bradwell in the County of Essex is 70 km from the centre of London and the Pickering Station in Canada is 12 km from Toronto. Indian Point Power Station is 38 km from New York City with its population of nearly 8 million. There are many other examples. The point is that Daya Bay is in no way unusual by international standards as regards its distance from a populated area.

Now, Sir, I mentioned the involvement of the Government and the relationship between the Government and the parties. It is important this evening that this is fully understood. Basically, the involvement of the Government flows from the provisions of the Scheme of Control. The scheme requires China Light & Power Co. Ltd. and its associates to submit a financing plan for consideration and approval by Executive Council whenever major proposals for major additions to the company's systems have been finalised. Thus, strictly speaking, it would have been only necessary for the Government to have been formally consulted when the Daya Bay project was well advanced. Naturally, the China Light Co. took the view from the outset that the project at Daya Bay was so large and so significant that it was wholly inappropriate that they should proceed without obtaining from the Government at least some indication that

there was no objection. The company needed assurance that a financing plan submitted in the future showing purchases of electricity from the plant would not be denied approval. The feasibility study recognised this when it reached the conclusion that both the Guangdong Power Co. and China Light should recommend to their respective Boards of Directors *and* Government authorities that the joint venture should be established.

The Government's prime concern in the context of the scheme of control is, of course, to ensure that consumers get a fair deal. Thus, an important consideration was that the cost of electricity generated by the nuclear power station should be no more expensive than it would have been had it been generated by a conventional station built in Hong Kong.

Questions of safety and design were, of course, given full and appropriate consideration. Before a decision was taken to inform the Hong Kong Nuclear investment Co. and China Light that the Government had no objection to their entering into contractual arrangements to participate in the joint venture, an important consideration taken into account was the safety of the plant both in construction and operation. In this connection, many already know that the design of the station will be very similar to that of Units 5 and 6 of the Gravelines Nuclear Power Station in France. The French stations are built in accordance with tried and tested technology. Another relevant factor in relation to safety was that the National Nuclear Safety Bureau had been established by China. This bureau will co-operate with the French Central Service for the safety of this nuclear installation, and will be responsible for ensuring that the Daya Bay plant complies in every respect with the safety requirements laid down in France and adopted by other international organisations. So, Members of the Council at one of the briefing sessions have heard from representatives of the joint venture company that the design basis for French power stations is that no evacuation must be necessary 10 km outside the plant even in the event of a serious accident; I wish to add that this fact was also taken into account when the decision was made by the Government that there was no objection to China Light and its subsidiary participating in the project.

The arrangements between Hong Kong Nuclear Investment Co. and the Guangdong Nuclear Investment Co. require that the highest international safety standards will govern the design, manufacture, erection, and commissioning and operation of the Daya Bay plant. In addition, they provide for the examination, inspection and acceptance of all the equipment and parts throughout the process of construction and commissioning. As Members well know, the standards to be applied will be those implemented on existing French plants together with applicable international standards, principally those of the International Atomic Energy Agency and the International Commission on Radiological Protection as well as applicable standards laid down by the Chinese authorities.

Mr. S. L. CHEN and others have commented upon management. The arrangements to which I have referred provide that the managers of the project and the operations departments shall initially be recommended by Hong Kong Nuclear Investment Co., that is to say, the Hong Kong partner. Following the fifth anniversary of the commissioning of the second generating unit, the managers of the project and operations departments shall be recommended by the Guangdong Nuclear Investment Co., that is to say, the Chinese partner, but the deputies to be appointed after the fifth anniversary shall still be recommended by the Hong Kong partner. In making their recommendations both parties are required to choose persons whose ability and experience are suited to the requirements of the relevant job, and *that* requirement persists for the life of the joint venture.

Sir, I have referred to the question of cost to the consumer, in other words the tariff. To ensure that the project would benefit consumers, we decided at an early stage that it would be wise to have a full and independent evaluation of the financial aspects of the project by merchant bankers. Accordingly in March 1983, as Members may recollect, the Government engaged consultants to look into the financial implications of the project. Furthermore, in August of the same year, we invited a firm of technical consultants to study the possible impact of the proposed in-take of electricity from Daya Bay on the stability of Hong Kong's power system. In the light of the advice received we concluded that the purchase of electricity from the project would provide significant savings and furthermore that on technical grounds the stability and reliability of Hong Kong's own system would not be adversely affected.

So with the benefit of entirely independent advice and after consulting the Executive Council, we informed China Light & Power of the Government's willingness, in principle, to endorse an offtake agreement. China Light & Power then formed the Hong Kong Nuclear Investment Co. Ltd.

In the course of our consideration of the project much attention was paid to the arrangements for the establishment and financing of the Hong Kong partner in the joint venture company, that is to say the Hong Kong Nuclear Investment Co. Ltd. The financing of this company was the subject of thorough and prolonged deliberations. The company was eventually formed with a paid up capital of \$300 million with additional capital provided by way of a loan guaranteed by the Government. But this route was followed, that is to say, a loan backed by a Government guarantee, because it was found to be a relatively cheap and effective way of providing the company with sufficient funds to pay its contributions to the joint venture company itself. I mention this matter specifically because it has been the subject of comment in the press and indeed in this debate.

Sir, we recognised at all times the importance and complexity of this project. And so between the feasibility study in 1980 and the formation of the joint

venture in 1985, we subjected the project to a long and detailed examination taking account of the safety, financial and economic aspects. Many issues were thoroughly explored and examined. We had full regard to the interest of Hong Kong's consumers and the public at large.

Some have suggested that the Government should withdraw its agreement to the project. I have explained the context in which that agreement was given and also its significance. I must emphasise this evening that the Government's agreement was given after the most careful and thorough consideration, and once it was confirmed and conveyed to China Light & Power Co. and Hong Kong Nuclear Investment Co., it was acted upon, in that the contractual arrangements leading to the formation of the joint venture company were completed and the offtake agreements were entered into. This is a binding commercial agreement entered into in good faith and simply cannot be withdrawn; the credibility of the Government and indeed of Hong Kong itself would be severely damaged with the most serious consequences in so far as our commercial and external relationships are concerned.

Sir, what is the way ahead? Clearly, the Administration shares in the general concern expressed by Members of this Council and, indeed, by the public. We have been taking active steps to encourage all those directly involved in the project, including the joint venture company, the suppliers and project managers to give as much information as possible regarding the building and operation of the station. The Hong Kong Government is in close and regular communication with the British Government and through them with the French and Chinese Governments, about the provision of information leading to reassurance. All those involved are being urged to take full account of Hong Kong's concern over safety matters. Furthermore, as Members are aware, the Secretary for Economic Services is currently in the United Kingdom holding discussions with various authorities. Meetings, discussions and briefing sessions have been held or arranged for Members and visits have been arranged so that Members of this Council and the media can see what is involved in the operation of a nuclear power station. Let me record that I am grateful to those who have assisted in these briefings and visits or projected visits for all their help.

In dealing with the issues, we recognised that with a nuclear power station built even 50 km away from Hong Kong it was necessary to examine the impact on Hong Kong and to devise any appropriate contingency planning. Thus, in mid-1985, long before Chernobyl, the Government engaged the services of the United Kingdom Atomic Energy Authority at Harwell to undertake five studies covering the background radiation monitoring programme, risk assessment, public reaction and education and appropriate contingency planning. The consultants' recommendations as has been said on the background radiation monitoring programme have already been implemented. The Royal Observatory have been working closely with their Chinese counterparts to build up

knowledge of the background radiation monitoring in Hong Kong and in the vicinity of the site. This information is of importance in the context of future radiation monitoring. The recommendations on our public education strategy are under consideration, and work on the study to assess accident probabilities is progressing. It is envisaged that all the consultants' studies will be completed by mid-1987 and the intention is to publish reports from the consultants in due course. Sir, I recognise the concern of Members and their anxiety to see that these studies are completed at an earlier date. I will certainly convey those views to the consultants to see what can be done.

Sir, Dr. Conrad LAM and Mr. HUI Yin-fat have mentioned the involvement of the contractors and in particular GEC. Of course this is a matter for the companies themselves to comment upon. But as it has been raised here, I shall reply. As Members are aware, China Light have already spoken on the subject. It was public knowledge that the parties to the joint venture envisaged that GEC should become involved in the project. Nevertheless, although it was always accepted that there would be negotiations and I repeat negotiations with GEC, it was recognised that any agreement entered into with that company would have to be on competitive terms. Had GEC not been able to meet the requirements both as to price and specification, then the joint venture company would no doubt have looked elsewhere.

Sir, as I said at the outset, decisions in relation to the use of nuclear power have now become far more difficult. The views expressed this afternoon will, I have no doubt, be taken into account by those concerned. The debate is timely.

Miss TAM and Mr. Allen LEE, amongst others, have mentioned the possibility of deferring the signature of the contracts. Sir, I am given to understand that all the arrangements in relation to this project are unlikely to be in place before October this year. That is to say after my Unofficial colleagues' visits and reports. This is still some months away, and I have no doubt that my Unofficial colleagues can complete their visits and consideration of their findings well before the relevant date. In these circumstances, there seems no need to suggest that the signing of contracts be delayed. There is time.

Sir, Mr. Martin LEE has respectfully reminded me of the words of my predecessor in this Council regarding the need for openness. Mr. LEE has said that he found that all the relevant information has been kept under a solid containment as strong as the one the French engineers will be constructing at Daya Bay. Sir, I appreciate his confidence in the strength of the containment, but I am mildly disturbed by the fact that his remarks contrast so vividly with Miss Maria TAM's remarks regarding all the meetings and briefings that have taken place at which a great deal of information has been given. Miss TAM has, of course, chided the Administration for not given sufficient information itself, but as I have said earlier we regard our duty as being principally to encourage and urge those who are directly involved to speak to Members of this Council.

We do feel that direct information will be the most helpful to Members of this Council. Certainly the Government is not shirking its responsibilities.

Sir, I do not believe that what has been said today will represent the last word on the subject. As I have explained, we are engaged upon a programme designed to ensure that those involved in this project provide full information with a view to giving the community the reassurance that is needed.

I am pleased to inform Members that to this end following discussions last week with the Hong Kong Nuclear Investment Co. Ltd., the Chairman, Mr. STONES, has agreed with my request that he should explore with the joint venture company the possibility of distributing to Members of this Council the feasibility study dealing with site selection, equipment study and system designs. I firmly believe that with this information, and with the benefit of briefings and information gleaned through the visits that my Unofficial colleagues are proposing to make, we will be getting close to the reassurance that I have just mentioned. When I hear further from the Chairman of Hong Kong Nuclear Investment Co. Ltd., I shall make another statement in this Council.

Sir, in concluding this debate, I commend to Members - and I include myself —the words of Socrates: 'No man is so thoroughly right as to be entitled to say that others are totally wrong. It is well to affirm your own truth, but it is not well to condemn those who think differently.'

### **Adjournment and next sitting**

HIS EXCELLENCY THE PRESIDENT: In accordance with Standing Orders I now adjourn the Council until 2.30 p.m. on Wednesday 23 July 1986.

*Adjourned accordingly at twenty-one minutes past Eight o'clock.*

*Note:* The short titles of motion/bills listed in the Order Paper have been translated into Chinese for information and guidance only; they do not have authoritative effect in Chinese.





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**WRITTEN ANSWERS****Annex I****Written answer by the Secretary for Health and Welfare to Dr. CHIU's supplementary question to Question 6.**

The answer is that compensation is not payable.

Under section 54(1) of the Public Health and Municipal Services Ordinance (Chapter 132), any person who sells, or offers or exposes for sale, or has in his possession for the purpose of sale or preparation for sale any food intended for, but unfit for, human consumption shall be guilty of an offence.

To the extent that the farmer has been warned not to sell his produce pending tests in the event of a suspected toxic red tide and such tests have subsequently proven that the red tide is toxic, it would, in fact, be an offence under this section of the Ordinance for the farmer not to dispose of his produce satisfactorily. Moreover, under section 59(1) of the same Ordinance, health inspectors are empowered to confiscate such produce. The Ordinance does not provide for any compensation in these circumstances.

