

**REPORT OF THE
PUBLIC ACCOUNTS COMMITTEE
ON
REPORT NO. 33A OF THE DIRECTOR OF AUDIT
ON
THE RESULTS OF VALUE FOR MONEY AUDITS
AND
SUPPLEMENTAL REPORT ON
REPORT NO. 32 OF THE DIRECTOR OF AUDIT
ON
THE RESULTS OF
VALUE FOR MONEY AUDITS**

December 1999

P.A.C. Report No. 33A

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I. INTRODUCTION

The Establishment of the Committee The Public Accounts Committee are established under Rule 72 of the Rules of Procedure of the Legislative Council of the Hong Kong Special Administrative Region, a copy of which is attached in *Appendix 1* to this Report.

2. **Membership of the Committee** The following Members are appointed by the President under Rule 72(3) of the Rules of Procedure to serve on the Committee:

Chairman	The Hon Eric LI Ka-cheung, JP
Deputy Chairman	The Hon Fred LI Wah-ming, JP
Members	The Hon David CHU Yu-lin The Hon NG Leung-sing The Hon Mrs Sophie LEUNG LAU Yau-fun, JP The Hon LAU Kong-wah The Hon Emily LAU Wai-hing, JP
Clerk	Mrs Florence LAM IP Mo-fee
Legal Adviser	Mr Jimmy MA Yiu-tim, JP

II. PROCEDURE

The Committee's Procedure The Committee's practice and procedure, as determined by the Committee in accordance with Rule 72 of the Rules of Procedure, are as follows:

- (a) the public officers called before the Committee in accordance with Rule 72 of the Rules of Procedure, shall normally be the Controlling Officers of the Heads of Revenue or Expenditure to which the Director of Audit has referred in his Report except where the matter under consideration affects more than one such Head or involves a question of policy or of principle in which case the relevant Bureau Secretary of the Government or other appropriate officers shall be called. Appearance before the Committee shall be a personal responsibility of the public officer called and whilst he may be accompanied by members of his staff to assist him with points of detail, the responsibility for the information or the production of records or documents required by the Committee shall rest with him alone;
- (b) where any matter referred to in the Director of Audit's Report on the accounts of the Government relates to the affairs of an organisation subvented by the Government, the person normally required to appear before the Committee shall be the Controlling Officer of the vote from which the relevant subvention has been paid, but the Committee shall not preclude the calling of a representative of the subvented body concerned where it is considered that such a representative can assist the Committee in its deliberations;
- (c) the Director of Audit and the Secretary for the Treasury shall be called upon to assist the Committee when Controlling Officers or other persons are providing information or explanations to the Committee;
- (d) the Committee shall take evidence from any parties outside the civil service and the subvented sector before making reference to them in a report;
- (e) the Committee shall not normally make recommendations on a case on the basis solely of the Director of Audit's presentation;
- (f) the Committee shall not allow written submissions from Controlling Officers other than as an adjunct to their personal appearance before the Committee; and

PROCEDURE

- (g) the Committee shall hold informal consultations with the Director of Audit from time to time, so that the Committee can suggest fruitful areas for value for money study by the Director of Audit.

2. **The Committee's Report** This Report by the Public Accounts Committee corresponds with Report No. 33A of the Director of Audit on the results of value for money audits which was tabled in the Legislative Council on 13 October 1999. Value for money audits are conducted in accordance with the guidelines and procedures set out in the Paper on Scope of Government Audit in the Hong Kong Special Administrative Region - 'Value for Money Audits' which was tabled in the Provisional Legislative Council on 11 February 1998. A copy of the Paper is attached in *Appendix 2*.

3. This Report also contains the Public Accounts Committee's supplemental report on Chapter 5 of Report No. 32 of the Director of Audit on the results of value for money audits which was tabled in the Legislative Council on 21 April 1999. The Committee's Report No. 32 was tabled in the Legislative Council on 7 July 1999.

4. **The Government's Response** The Government's response to the Committee's Report is contained in the Government Minute, which comments as appropriate on the Committee's conclusions and recommendations, indicates what action the Government proposes to take to rectify any irregularities which have been brought to notice by the Committee or by the Director of Audit and, if necessary, explains why it does not intend to take action. It is the Government's stated intention that the Government Minute should be laid on the table of the Legislative Council within three months of the laying of the Report of the Committee to which it relates.

**III. REPORT OF THE PUBLIC ACCOUNTS COMMITTEE ON
REPORT NO. 32 OF THE DIRECTOR OF AUDIT ON
THE RESULTS OF VALUE FOR MONEY AUDITS**

Laying of the Report Report No. 32 of the Director of Audit on the results of value for money audits was laid in the Legislative Council on 21 April 1999. The Committee's subsequent Report (Report No. 32) was tabled on 7 July 1999, thereby meeting the requirement of Rule 72 of the Rules of Procedure of the Legislative Council that the Report be tabled within three months of the Director of Audit's Report being laid.

2. **The Government Minute** The Government Minute in response to the Committee's Report No. 32 was tabled in the Legislative Council on 13 October 1999. The Committee will refer to matters arising from this Minute in their next Report.

IV. COMMITTEE PROCEEDINGS

Consideration of the Director of Audit's Report tabled in the Legislative Council on 13 October 1999 As in previous years, the Committee did not consider it necessary to investigate in detail every observation contained in the Director of Audit's Report. The Committee have therefore only sought clarification from the Administration on some of the issues raised in the Director of Audit's Report No. 33A. The Administration's replies have been included in this Report.

2. **Meetings** The Committee held 23 meetings, including three public hearings. During the public hearings, the Committee heard evidence from a total of 23 witnesses including two Bureau Secretaries. The names of the witnesses are listed in *Appendix 3* to this Report.

3. **Arrangement of the Report** The evidence of the witnesses who appeared before the Committee, and the Committee's specific conclusions and recommendations, based on the evidence and on their deliberations on the relevant chapters of the Director of Audit's Reports, are set out in Chapters 1 and 2 below.

4. A verbatim transcript of the Committee's public proceedings will be placed in the Library of the Legislative Council for inspection by the public.

5. **Acknowledgements** The Committee wish to record their appreciation of the co-operative approach adopted by all the persons who were invited to give evidence. In addition, the Committee are grateful for the assistance and constructive advice given by the Secretary for the Treasury, the Legal Adviser and the Clerk. The Committee also wish to thank the Director of Audit for the objective and professional manner in which he completed his Report, and for the many services which he and his staff have rendered to the Committee throughout their deliberations.

Chapter 1

The Government's monitoring of electricity supply companies

Part I : Introduction

According to paragraphs 1.1 to 1.8 of the Audit Report, the Government's overall responsibility for the supply of electricity was to ensure that consumers received a reliable electricity supply service at a reasonable price. The Government used the Scheme of Control Agreements (SCAs) to monitor the performance of the electricity supply companies to ensure that the investment in major fixed assets was justified and the tariff rates were reasonable. The SCAs provided a basis for determining the permitted return and the net return of the electricity supply companies. The permitted return was directly proportional to the average net fixed assets (ANFA), the purpose of which was to ensure that the electricity supply companies had sufficient incentive to invest in fixed assets to maintain a reliable electricity supply.

2. The SCAs were for a term of 15 years. The current SCA with CLP Power Hong Kong Limited (i.e. Company A in the Audit Report and formerly known as China Light & Power Company, Limited before 5 March 1999) covered the period October 1993 to September 2008, and the one with The Hongkong Electric Company Limited (i.e. Company B in the Audit Report) covered the period January 1994 to December 2008. The SCAs provided that interim reviews had to be carried out in the fifth and tenth years after the effective dates. In the interim reviews, the Government and the electricity supply companies could request modifications to be made to the SCAs.

3. According to paragraph 5.5 of the Audit Report, the level of power generation capacity was a major area of concern to both the electricity supply companies and consumers. Under the SCAs, the electricity supply companies had to acquire adequate power generation capacity to provide a reliable electricity supply. Consumers had to meet the costs of acquiring power generation capacity through electricity tariffs. In approving the development plan of an electricity supply company, the Government's priority was to ensure that the company's power generation capacity was adequate to meet the forecast demand in order that there was a reliable electricity supply. If the actual demand turned out to be much lower than the forecast demand, there would be excess power generation capacity and consumers would have to bear the costs arising from the excess capacity.

The Government's monitoring of electricity supply companies

4. The Committee noted Audit's review on the Government's effectiveness in achieving its objectives of monitoring the performance of the electricity supply companies, particularly the main objective of ensuring a reliable and efficient electricity supply at a reasonable price. The review covered the following areas:

- whether the Government had carried out its monitoring role effectively, particularly on the Black Point Project of CLP Power Hong Kong Limited (CLP); and
- whether there were any issues that the Government should pursue with the electricity supply companies for making necessary modifications to the SCAs in the current interim reviews.

5. The Committee held three public hearings on 4 May, 20 May and 4 October 1999 to receive further evidence from the Administration and the electricity supply companies on the findings and observations of the Director of Audit.

6. The following paragraphs are divided into four parts. Part II contains evidence taken at the public hearings held on 4 May and 20 May 1999, and written evidence submitted to the Committee after the hearings. Part III briefly describes the Report on "China Light and Power Black Point Project: The Government's Monitoring of Electricity Supply Companies" prepared by the Research and Library Services Division of the Legislative Council (LegCo) Secretariat, and comments from the Administration. Part IV contains evidence taken at the third public hearing held on 4 October 1999, and written evidence submitted by the Administration and CLP after the hearing. Part V sets out the conclusions and recommendations of the Committee.

Part II : Evidence taken at the public hearings held on 4 May and 20 May 1999

Supplemental agreements to the SCAs with electricity supply companies

7. The Committee noted the following recommendations in paragraph 5.13 of the Director of Audit's Report:

- the SCAs with CLP and The Hongkong Electric Company Limited (HEC) should be revised so as to exclude excess power generation capacity from the ANFA for calculating the permitted return; and
- the SCA with HEC should be revised so that the company's auditing reviews also covered the procurement policies, procedures and practices of fuel, major equipment and services.

8. Noting that the Administration would soon sign two Supplemental Agreements to the SCAs, one with CLP and another one with HEC, the Committee asked whether the Administration had considered Audit's recommendations in concluding the Supplemental Agreements and whether the proposed modifications would result in lower electricity tariffs, thereby benefiting consumers.

9. **Ms Maria KWAN Sik-ning, Acting Secretary for Economic Services**¹, said at the public hearing on 4 May 1999 that:

- the Administration had taken note of Audit's recommendations and the concerns raised by LegCo Members previously. It had taken a proactive stance in its negotiation with the electricity supply companies during the interim reviews of the SCAs. An agreement had been reached and the Supplemental Agreements would be signed within the week;
- one of the improvements made to the SCAs was that if a new power generation unit approved by the Government in future was found on commissioning to result in excess power generation capacity, a proportion of the related fixed assets would be excluded from the calculation of the permitted return; and

¹ Note: Ms Maria KWAN Sik-ning also attended the second public hearing on 20 May 1999 and the third public hearing on 4 October 1999 in her capacity as Deputy Secretary for Economic Services.

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- the SCA with HEC had also been revised to include the procurement policies, procedures and practices of fuel, major equipment and services.

10. The Committee asked whether the Supplemental Agreements would cover units 7 and 8 at the Black Point Power Station and whether CLP would develop other new power generation units before 2008 i.e. during the term of the current SCA. The **Acting Secretary for Economic Services** said that the Supplemental Agreement with CLP:

- would only apply to future additions of power generation capacity after the installation of units 7 and 8 at the Black Point Power Station, since there was a separate agreement for the deferral of the commissioning of these two units; and
- would also cover the addition of capacity to an existing power generation unit.

11. **Mr LI Kwok-tso, Principal Assistant Secretary (Economic Services) Financial Monitoring**, supplemented that the Government and CLP had agreed to review in the last quarter of 1999 the need to commission units 7 and 8.

12. In his letter of 15 May 1999 in *Appendix 4*, **Mr Stephen IP Shu-kwan, Secretary for Economic Services**, provided the Committee with the following documents:

- extracts from the Consultancy Study on CLP's 1992 Financial Plan dated December 1992;
- LegCo Brief dated 6 May 1999 on Scheme of Control Agreements with the electricity supply companies, 1997/98 Interim Review;
- a copy of the Supplemental Agreements in respect of the Scheme of Control Agreements with CLP and with HEC; and
- a Government press release dated 6 May 1999 announcing the Supplemental Agreements.

**Forecast variance and
excess power generation capacity**

13. According to the Government announcement on the Supplemental Agreements, the modifications to the SCAs, which included lowering the return on fixed assets financed by funds from growth in customers' deposits, excluding excess power generation capacity from securing a return, extension of the useful life of assets, and inclusion of reference to demand side management and environmental obligations, would bring economic benefits to consumers in the long term. It was estimated to bring about accumulated savings in tariff charges in the order of about \$1,100 million up to 2008. With reference to Table 3 of the Audit Report, which showed the variance between CLP's forecast and actual maximum demand for the period 1992 to 1997, the Committee asked whether the same method for calculating the accumulated savings could be used to find out the amount of excess tariffs charged to customers due to the excess power generation capacity arising during the period 1992 to 1997.

14. At the public hearing on 4 May 1999, the **Acting Secretary for Economic Services** and the **Principal Assistant Secretary (Economic Services) Financial Monitoring** said that:

- under the current SCAs, the electricity supply companies were allowed a certain level of return that was directly proportional to their actual capital investments. It would be difficult to ascertain whether there was any excess power generation capacity and whether the customers had been overcharged, because any estimate would be dependent on the forecasts made in the past;
- the savings of \$1,100 million were only an estimate made by the electricity supply companies in the light of modifications to the SCAs. They would be achieved only after the Supplemental Agreements had been enforced; and
- a mechanism had now been put in place for determining whether there was any excess power generation capacity. If the excess capacity situation arose in the future, a proportion of the related fixed assets would be excluded from the calculation of the permitted return.

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15. **Mr Mike Price, Managing Director, CLP Power Hong Kong Limited,** informed the Committee that:

- CLP's original plan was to install two gas-fired units at Black Point and another two at Tsing Yi. On further analysis, this plan was changed. All new units were to be installed at Black Point. The old units at Tsing Yi were to be decommissioned;
- CLP had acted in good faith when it entered into the contract for the Black Point units and all the associated gas infrastructure in 1992. What had happened since then was that there had been a flight of manufacturing industries, in particular across the border, which led to lower sales of electricity than the forecast. CLP had been working closely with the Government over a number of years and had progressively deferred the commissioning of the units. The latest deferral was for units 7 and 8. CLP would discuss with the Economic Services Bureau (ESB) in the fourth quarter of 1999 to determine the ultimate position of these two units;
- in response to the lower electricity sales, CLP had reduced its capital expenditure by over \$14 billion over the period 1992 to 1999, representing 24% of the total capital expenditure in its 1992 Financial Plan. The company had also been tackling its operating expenditure very aggressively. In the same period, it had achieved a saving of \$5 billion, representing 24% of the projected operating expenditure. These measures had resulted in lower tariffs for customers; and
- the above showed that CLP had been trying to address the needs of its customers by both deferring the commissioning of the Black Point units and implementing internal measures on efficiency and cost control.

16. Referring to Table 3 of the Audit Report, the Committee asked whether the persistent variance between the actual maximum demand and the forecast maximum demand for the period 1992 to 1997 was due to inaccurate forecasts produced by CLP, which reflected the ineffective monitoring by the Government. The **Acting Secretary for Economic Services** said at the public hearing on 4 May 1999 that:

- there was no guarantee in any forecasts that there would not be any variance. What could be done was that when making the forecasts, all relevant factors were considered in order to arrive at the best possible assessment;

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- ESB had engaged a consultant to assess the electricity supply companies' forecasts. The Economic Analysis Division (EAD) of the Financial Services Bureau also produced independent forecasts to cross-check those forecasts. Based on the assessments available at the time, the forecasts were considered reasonable. As figures on the actual sales of electricity were now available, the variance between the forecast maximum demand and actual maximum demand could now be ascertained; and
- a high reserve margin had never been the intention. The variances were due to the fact that the forecasts had not been very accurate.

17. In reply to the Committee's question as to whether CLP's assessment of the economic environment in the late 1980s and early 1990s was accurate, **Dr Albert POON, Chief Planning Manager, CLP Power Hong Kong Limited**, said that:

- CLP's 1992 Development Plan and Financial Plan were supported by the forecasts conducted at the end of 1991. The company encountered difficulties when conducting those forecasts because the economic environment was changing;
- the forecasts were divided into two parts, namely industrial and non-industrial. For the period 1992 to 1999, the variance against actual sales of electricity to the non-industrial sector was only 0.9% per annum. The largest variance was found in the industrial sector;
- in 1991, the average annual growth rate of the sale of electricity to the manufacturing sector for the preceding five years was 3.6%. In the light of the fact that Hong Kong's economy had taken a downturn after 1989 and manufacturers had started to move their manufacturing processes to the Mainland, CLP produced a bold forecast by adjusting the annual growth rate to 0.9%. The actual annual growth rate turned out to be -4.8%; and
- the difficulty lay in the fact that the forecasts were made at the peak of a growth period and the future growth was uncertain. It was comparable to making a forecast of the Hang Seng Index in July/August 1997. With hindsight, one could easily say that a better job could have been done. However, given the information available at the time, no matter which methodology had been used, the change in the environment was unpredictable.

18. **Mr TANG Kwong-yiu, Government Economist**, also said that:

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- from 1987 to 1992, the average annual growth rate of the number of factories was -3%. For the period 1993 to 1998, it was -9%;
- the average annual growth rate of the number of employees in the manufacturing sector from 1987 to 1992 was -7.8%. For the period 1993 to 1998, it was -12.4%; and
- the above figures indicated that negative growth had begun in the late 1980s and accelerated from 1993 onwards.

19. The Committee noted that paragraphs 2.15 and 2.18 of the Audit Report stated that:

- during the period 1989 to 1991, the annual growth rates of the actual maximum demand for electricity had already decreased. The rates were 8.3% for 1989, 4.3% for 1990 and 3% for 1991;
- the annual growth rates of the forecast maximum demand were 8.6% for 1992, 8.3% for 1993 and 8.1% for 1994; and
- the sale of electricity to the manufacturing sector were forecast to increase at an average annual rate of 0.8% during the period 1992 to 1997. However, the actual sales of electricity to this sector decreased at an average annual rate of 5% during the same period.

In the light of the above, the Committee asked:

- whether the figures relating to the actual maximum demand for the period 1989 to 1991 had been considered when the 1992 Development Plan was made;
- why the forecasts for the period 1992 to 1994 were maintained on the high side when a decreasing trend was apparent; and
- whether the Administration had checked the past records and figures when it submitted its recommendation on the 1992 Development Plan to the Executive Council (ExCo) in December 1992.

20. The **Government Economist** pointed out that:

- there were wide fluctuations in economic performance during the 1980s and

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early 1990s. The wider the fluctuations, the harder it was to forecast the maximum demand which was critical for determining the timing of acquiring additional power generation capacity;

- in any forecasts, especially those relating to the long-term planning of public utilities, one should not just look at the figures of the preceding few years but should take a longer-term view. CLP, EAD and the Government's consultant had taken into account a longer time span starting from the early 1980s;
- although the figures showed that there was a decline in demand in 1990 and 1991, it should be noted that there were some economic factors which led to slower growth of the Hong Kong economy in 1989/90. From 1990 to 1991, the economy recovered. However, there were wide fluctuations in terms of economic performance. In making the forecasts, it was advisable not to put too much emphasis on these short-term fluctuations;
- there were variances in EAD's and CLP's forecasts of the maximum demand. CLP had applied a decreasing load factor in its forecast whereas EAD's forecast was based on a constant load factor. As the actual load factor turned out to be on an upward trend, CLP's forecast of the maximum demand was at a greater variance with the actual maximum demand than that of EAD; and
- the relocation of the manufacturing sector started in the 1980s. However, it remained at a preliminary stage until the early 1990s. During the period 1989 to 1991, the situation stabilised although there was some uncertainty about the future in 1989. Despite the short-term fluctuations, EAD was of the view that the sale of electricity would more or less be stable and that a substantial decline was not predicted.

21. At the request of the Committee, the Government Economist provided further information on the relocation of the manufacturing sector outside Hong Kong in the 1980s and 1990s and on EAD's economic analysis for the period 1989 to 1991. In his letter dated 13 May 1999 in *Appendix 5*, the **Government Economist** pointed out that:

- the number of manufacturing establishments declined fairly moderately in 1990 and 1991, by 2.1% and 4.9% respectively. More substantial decline occurred in 1992 and thereafter, averaging at an annual rate of over 9% between 1992 and

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1998. The decline in employment in the manufacturing sector accelerated at the turn of the last decade. The relocation of manufacturing processes from Hong Kong to the Mainland was the major contributory factor. However, it was not easy to conclude at that time that the relocation process would intensify so markedly after 1992;

- the decline in the Index of Industrial Production and the volume of domestic exports became apparent only from 1993. Their average annual rates of decline between 1992 and 1998 were still moderate, at 2.2% and 3.3% respectively. The dampening impact of industrial relocation on the level of industrial production in Hong Kong had become more apparent only after the first few years in the 1990s;
- the declining trend in CLP's electricity sales for industrial use became apparent only in 1992 and thereafter. The average annual rate of decline between 1992 and 1998 was 3.7%;
- the number of establishments and employment in the manufacturing sector, industrial output and volume of domestic exports, especially from 1985 to 1991, were all rather volatile. Although Hong Kong's manufacturing activities might have shown some signs of slowing down from 1989 to 1991, it would have been difficult at that time to associate the phenomenon solely with the wave of industrial relocation which only became evident subsequently. There were other economic factors including slower growth in the Hong Kong economy, the macro-economic adjustment taking place in the Mainland, the Gulf War and the economic downturn in the United States in the early 1990s;
- to use a long-term projection of electricity demand in planning the provision of major electricity supply facilities, it would not have been very prudent to extrapolate for eight years after 1991 mostly on the basis of the figures for the three-year period 1989 to 1991, which were subject to varied and particular developments; and
- the substantial relocation of manufacturing activities across the border since 1992 was also related to the strong push for further opening up of the Mainland after Mr DENG Xiao-ping's visit to Guangdong advocating more expeditious economic development in the spring of 1992. This development only came

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after the Government's forecasting exercise, which was carried out in early 1992.

22. The various issues raised were further discussed at the second public hearing on 20 May 1999. From the Information Note on "Relocation of the Manufacturing Sector Outside Hong Kong in the 1980s and the early 1990s" in *Appendix 6* (Information Note) prepared by the Research and Library Services Division of the LegCo Secretariat, the Committee noted that starting from the late 1980s, CLP had forecast a decrease in electricity demand in the manufacturing sector, as illustrated by the following quotations from CLP's Annual Reports:

- "Sales to the manufacturing sector showed a smaller increase of 4.4%, reflecting the slow-down in manufacturing activities in the year." (CLP, 1988 Annual Report);
- "A continuous slow-down in Hong Kong manufacturing activities has reduced the growth [in sales of electricity] in this sector to 1.7%." (CLP, 1989 Annual Report); and
- "Sales [of electricity] to manufacturing customers declined by 1.6% due to difficult trading conditions and continuing migration to Southern China." (CLP, 1990 Annual Report).

From Tables 1 and 2 of the Information Note, the Committee also noted that starting from 1989 onwards, there was a continual decrease in the annual average number of establishments and employment in the manufacturing sector. The trend was also apparent according to the description in paragraphs 3.10 to 3.13. Table 6 of the Information Note further indicated that the growth rate in CLP's sales of electricity to the manufacturing sector continued to decline since 1987. The decline was most significant during the period 1992 to 1995 i.e. -3.5% in 1992, -4% in 1993 and 1994 and -5.6% in 1995. From paragraphs 4.6 to 4.14 of the Information Note, the Committee also noted that the then LegCo Members had persistently expressed their concern about excess power generation capacity since the mid-1980s.

23. In the light of the above, the Committee asked:

- why, despite CLP's being aware of the decline in electricity demand in the industrial sector, it had still forecast an increase in electricity demand and applied for additional power generation capacity in its 1992 Development Plan; and

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- why the Administration had not queried the forecasts produced by CLP.

24. The **Chief Planning Manager, CLP Power Hong Kong Limited**, said that:

- between 1987 and 1991, the actual average increase in the demand for electricity in the industrial sector was 3.6%. Owing to the decline in demand in 1991 and 1992, CLP had adjusted the annual growth rate to 0.9%, against the original projection of about 3%. Compared to the previous years, this percentage represented a downward adjustment. No one would have been bold enough at that time to forecast a negative growth rate of 4.8% or 5%;
- despite the decline in 1991 and 1992, there were signs indicating an increase in electricity demand. First, the Government had decided at that time to build more industrial estates in an attempt to stabilise industrial development in Hong Kong. Secondly, Shiu Wing Steel Company had a plan to expand its plant in Tuen Mun with new electric arc furnaces although, as it turned out, the expansion plan was suspended; and
- for various reasons, the manufacturing sector had not only shifted northwards but also to other areas in South East Asia.

25. **Mrs Sandra MAK, Group Public Affairs Manager, CLP Power Hong Kong Limited**, supplemented that CLP had always been consistent in presenting the relevant facts and figures. In its application for additional power generation units, CLP had clearly pointed out that the annual growth rate of electricity sales in the industrial sector would drop from 3.6% [during the period 1987 to 1991] to about 1% [during the period 1992 to 1999].

26. The **Government Economist** also said that:

- the set of figures that was most relevant to electricity demand was not the number of establishments and employment in the manufacturing sector but the Index of Industrial Production and the volume of domestic exports. According to Charts 6 and 8 of the Information Note, the figures from 1989 to 1991 were relatively stable. The decline in the volume of domestic exports and the Index

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of Industrial Production became obvious after 1992 and 1995 respectively;

- EAD had also conducted economic analysis for the same period. The trend of the relocation of manufacturing processes to the north had been identified. However, this was only one of the characteristics of the Hong Kong economy. There were other factors affecting the economy, which should be taken into consideration. As mentioned in his letter of 13 May 1999, these included the sluggishness of the economy in the latter half of 1989, the Gulf War in 1991 and the economic recession in the United States around the same period; and
- though it was difficult to quantify the effect of Mr DENG Xiao-ping's visit to Guangdong in the spring of 1992, it was apparent that the open-door policy was expedited after that visit.

27. **Mr Stephen LAU Chi-sing, Economic Planning Manager, CLP Power Hong Kong Limited**, pointed out that:

- there had always been wide fluctuations in electricity demand by the manufacturing sector because the demand could be affected by economic conditions in other countries. In making the forecast, one could not just rely on the time-trend model or any other scientific models, but should also consider the prevailing circumstances and the external factors; and
- in addition to the factors put forth by the Government Economist, there were two other factors which had affected the electricity demand. They included the high inflation in Hong Kong and the surge in land prices in the early 1990s, which had expedited the relocation of the manufacturing processes to the north.

28. Referring to EAD's assessment of CLP's electricity demand forecast for 1992-1999, the Committee asked how EAD had in 1992 arrived at the forecast that for the period 1992 to 1997, the sale of electricity to the industrial sector would grow on average at 2.5% per annum and, as this figure was higher than CLP's 0.9%, whether EAD had been over-optimistic. The **Government Economist** said that:

- the growth rate had been adjusted downwards although it was not in the negative. In fact, EAD had taken into account the decline in the sale of electricity to the manufacturing sector in adjusting the growth rate; and

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- in making the forecasts, EAD had considered the changes in electricity demand over a long period. From 1976 to 1981, the annual average growth rate was 7.6%; from 1981 to 1991, it was 5%; and for the whole period 1976 to 1991, it was 5.9%. These figures showed that the increase in demand had been significant. In 1992, the growth rate was adjusted downwards. The forecast for the period 1991 to 1995 was 2.5%; and for the period 1995 to 1999, it was 2.3%.

29. The **Government Economist** supplemented in his letter of 4 June 1999 in *Appendix 7* that the difference in projection methodology and CLP's lower projected growth rate of domestic exports were the main reasons for the discrepancy between EAD's and CLP's projected electricity sales for industrial use.

30. In her letter of 4 June 1999 in *Appendix 8*, **Mrs Annette Hobhouse, Commercial Manager, CLP Power Hong Kong Limited**, provided the Committee with a recapitulation of the factors the company took into account in its forecast of an increase in electricity demand of 0.9% per annum in the manufacturing sector:

- the factors used by CLP in the econometric models included export figures for the respective manufacturing sectors, production indices, population, a proxy for outward processing (re-exports to China) and, in the specific case of the metals industry, the commissioning of new arc furnaces; and
- the preliminary results were considered against other specific trends and developments, the effect of which could not be sufficiently captured in the models. An example of a qualitative trend that was considered in 1991 was the Government's policy on industrial estates including the proposed construction of a new third industrial estate in 1993. After fine-tuning, forecast numbers were finally adopted.

It was also pointed out in the letter that:

- the 0.9% per annum figure used in CLP's forecast represented a downward revision from the econometric model prediction of 2.2% per annum;
- with the exception of Shiu Wing Steel Company, almost all projected growth rates for 1992-1998 were substantially lower than the previous actual growth rates (between -1% and -7%). Shiu Wing's forecast reflected the planned addition of a new plant in Tuen Mun with new electric arc furnaces that consumed more electricity; and

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- in spite of the conservative estimate, it was unfortunate that the 1992-1998 period witnessed an actual decline of 4.8% per annum, as a result of the quicker and more widespread manufacturing relocation.

31. In reply to the Committee's question about the factors that the Administration had considered in making its forecasts, the **Secretary for Economic Services** said at the second public hearing on 20 May 1999 that:

- with hindsight, one could say that the forecasts could have been done better. However, there were fluctuations in the sale of electricity and it was not a continual declining trend. In 1991, as compared with the previous year, there was an increase although the growth rate was only 0.5%. This was followed by a decrease of 3.5%. At that time, it was difficult for anybody to estimate whether or not there would be a continual downward trend. The experts could only consider the factors at play at the time in order to produce the most accurate forecast. This had been clearly explained to LegCo Members at a Panel meeting of the LegCo in 1996; and
- as far as the Administration was concerned, a stable and reliable supply of electricity was of paramount importance. The Administration had the responsibility to ensure that there would be sufficient electricity supply to meet the demand of the public, including the business and industrial sectors.

32. The **Secretary for Economic Services** supplemented in his letter of 7 June 1999 in *Appendix 9* that:

- in assessing CLP's forecast for 1992-1999, ESB took into account the advice of Burns & Roe (i.e. the Government's consultant) on CLP's load factor and EAD's independent forecast of electricity demand in CLP's supply area. The key issues focused upon were the company's local sales of electricity, load factor and maximum demand;
- ESB was informed by CLP in 1991 that their electricity sales would continue to

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grow at an average annual rate of 6.1% over the period 1992 to 1999 which was close to the average annual growth rate of 5.8% projected independently by EAD;

- EAD found it difficult to predict future load factors and considered that Burns & Roe should be asked to give advice on this aspect. For the purpose of EAD's projection, it was assumed that CLP's load factor would remain steady at its 1991 level of 56.2% throughout the period 1992 to 1999. Burns and Roe subsequently advised that they found no reason to question CLP's projections of future load factors which ranged from 55.3% to 52.5%;
- taking into account the fact that CLP's sales forecast and projected load factors over the period were regarded as reasonable, ESB considered CLP's forecast of average annual growth in maximum demand for the period, which was derived from these two elements, to be within reasonable bounds;
- on the basis of the relevant economic data at that time, it was not possible to quantify directly the phenomenon of the relocation of manufacturing activities to the Mainland, from amongst the multitude of developments influencing the local manufacturing sector that were occurring concurrently. The statistical data that were used in each round of projection of electricity demand actually captured the fact that the relocation had already started at that time, but had been much intensified in the ensuing years of the 1990s; and
- the costs of land and labour in Hong Kong relative to those in the Mainland, and the underlying policies and systems which affected such costs, were no doubt relevant considerations for those manufacturers who had relocated their activities. The impact of these factors had been reflected in the relevant economic data over the years.

33. In his letter of 30 June 1999 in *Appendix 10*, **Mr Dominic CHAN Yin-tat, Director of Audit**, commented on the additional information provided by the Secretary for Economic Services and the Commercial Manager, CLP Power Hong Kong Limited. Referring to the chart (*in Appendix 11*) produced by CLP at the public hearing on 4 May 1999 which stated that the manufacturing forecast was the primary cause of the forecasting variance, the Director of Audit pointed out that:

- since CLP's forecasts of sales of electricity and load factor were both inaccurate, it was inappropriate for CLP to attribute the significant variance in maximum demand solely to the sharp fall in sales of electricity to the

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manufacturing sector; and

- the statement was misleading because the total forecasting variance included other significant components. One of them was the load factor forecast variance which was greater than the manufacturing forecast variance.

34. In the same letter, the Director of Audit also commented on CLP's statement about the unforeseen rapid migration of manufacturing. The conclusions drawn from the comments were that:

- CLP had not given due consideration to all relevant economic indicators when it forecast that the sale of electricity to the manufacturing sector would grow at an average rate of 0.8% per annum for the forecasting period 1992 to 1999; and
- CLP should have been aware that the growth trend in the sale of electricity to the manufacturing sector had reversed in 1989 when it made its forecast in 1991.

35. As regards the Secretary for Economic Services' statement that CLP's forecast was within reasonable bounds, the Director of Audit considered that CLP's forecast of maximum demand for the period 1992 to 1999 was unduly optimistic and was at material variance with the best-fit line. Therefore, it was not within reasonable bounds.

36. In response, the **Secretary for Economic Services** commented in his letter of 30 September 1999 in *Appendix 12* that:

- whether a forecast should be regarded as reasonable at the time of forecast and whether it proved to be accurate after the event were two different things.....the crucial point should be whether it was reasonable for the Administration to conclude at the time that CLP's forecast was within reasonable bounds on the basis of the best information available and whether the Administration had taken reasonable steps to cross-check CLP's forecast;
- the Administration saw no reason why Audit's "best-fit line" should be

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regarded as the benchmark against which CLP's and EAD's forecasts and the Administration's evaluation at the time should be measured;

- the "best-fit line", like CLP's and EAD's forecasts, was also more optimistic than the actual maximum demand; and
- the difference in magnitude of the variances between actual maximum demand and Audit's "best-fit line"/CLP's forecasts/EAD's forecasts should be seen in perspective. Once the actual maximum demand was known, it was comparatively easy to pick with hindsight a forecast and a forecasting methodology which would produce an outcome closest to the actual outcome.

CLP's forecasts of electricity demand for the period 1999 to 2008

37. Further to the supplemental agreements reached with the electricity supply companies, the Committee asked for further information on the forecasts of electricity demand during the remaining period of the SCA i.e. up to 2008. The **Commercial Manager, CLP Power Hong Kong Limited** said that the future forecasts, which were contained in the company's financial plan, had been submitted to ESB. She had some concern about releasing the relevant information into the public domain because it was commercially sensitive as it would have an impact on the company's future share prices or the market's view of the share prices.

38. In reply to the Committee's question as to whether there was a mechanism to regulate the disclosure of commercially sensitive information by public utility companies in order to protect public interest, the **Secretary for Economic Services** said in his letter of 7 June 1999 in **Appendix 9** that:

- the advice of the Secretary for Financial Services was that there were general regulations pertaining to the disclosure of "price sensitive information" to public shareholders and investors if the company concerned had securities listed on the Stock Exchange of Hong Kong; and
- the Listing Rules of the Stock Exchange, which was the principal regulation governing the disclosure of "price sensitive information" by listed companies, provided that when developments were likely to have a significant effect on market activity or the price of any listed securities, it was the direct responsibility of the directors to ensure that such information was kept strictly confidential until a formal public announcement was made. If, at any time, it

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was felt that the necessary degree of security could not be maintained, an announcement should be made. The objective was to ensure the existence of a fair market in the securities listed on the Exchange.

39. In view of CLP's concern about releasing the information on the forecasts of electricity demand for the period 1999 to 2008, the Committee requested the Director of Audit to review the relevant information kept at ESB with a view to assessing the reasonableness of the forecasts. After reviewing the forecasting methodology used by CLP and the major assumptions made under the main forecasting scenario contained in the Load Forecast Report of March 1999, the **Director of Audit** informed the Committee in his letter of 9 June 1999 in *Appendix 13* that:

- CLP's forecasts for the period 1999 to 2008 were reasonable and represented a fair estimation of the electricity demand for this period; and
- the Administration was in the process of reviewing, with the assistance of consultants, CLP's forecasts of electricity demand for this period and the relevant Financial Plan. The review was expected to be completed by 30 September 1999.

40. The **Secretary for Economic Services** advised the Committee in mid-November 1999 that the Administration's review of CLP's forecasts of electricity demand for the period 1999 to 2008 and the Financial Plan for the period 1999 to 2004 was still in progress.

Forecasting methodologies

41. The Committee noted in paragraphs 4.10 and 4.11 of the Audit Report that EAD had used different forecasting methodologies to cross-check the forecasts produced by the electricity supply companies. The Committee also noted Audit's view in paragraph 3.7 that the variances between HEC's forecasts and actual values in respect of the maximum demand and the sale of electricity were within acceptable ranges. The Committee then asked whether EAD should have adopted a consistent approach in cross-checking the forecasts of the two electricity supply companies, why HEC's forecasts were more accurate than CLP's and whether CLP had used the wrong methodology.

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42. At the public hearing on 4 May 1999, the **Government Economist** said that:

- EAD had applied the same approach in examining the forecast results of alternative approaches used by the two electricity supply companies. The principle to be followed in this exercise was to make use of all available data;
- EAD had not merely followed the methodology used by the electricity supply companies, but used the methodology which was considered most appropriate to cross-check the forecasts. It had also used other methodologies to cross-check its own forecasts and updated its analysis when changes were observed. Since 1992, EAD had updated its own analysis twice; and
- with regard to the accuracy of HEC's forecasts, it should be noted that HEC supplied electricity mainly to offices. On Hong Kong Island, there was not a huge demand for electricity for industrial use and the increase in the number of offices had always been steady over the years. It was therefore easier for HEC to produce more accurate forecasts. On the other hand, the supply of electricity to the industrial sector, especially in the New Territories and some old Kowloon districts, had always been one of CLP's core businesses. Since a large number of industrial establishments in these districts had moved northwards, CLP had been facing a rather unique operating environment.

43. The **Acting Secretary for Economic Services** also said that the two electricity supply companies were responsible for supplying electricity in a reliable manner. They should decide for themselves the most appropriate methodology to be used in producing the forecasts. The role of the Administration, through EAD and the Government's consultant, was to evaluate whether these forecasts were reasonable.

44. With regard to the forecasting methodology used by EAD, **Mrs Rebecca LAI KO Wing-ye**, **Acting Secretary for Financial Services**, said that:

- the role of EAD was to provide professional service to Government bureaux and departments. While the user department could indicate its preference for a particular methodology or methodologies to be used, EAD would give its professional advice on their appropriateness. EAD was also prepared to use different methodologies in order to arrive at the most professional evaluation of the forecasts; and
- the Financial Services Bureau would respect the professional advice provided by EAD.

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45. On the forecasting methodology used by CLP, the **Commercial Manager, CLP Power Hong Kong Limited**, said that:

- two reputable consultants, Raytheon and Electric Power Research Institute, had thoroughly reviewed CLP's forecasting methodology in 1996 and confirmed that the methods, approaches and assumptions used in the 1992 forecast were professionally sound. Its forecasts had been accurate in all sectors other than the manufacturing sector up to 1992. CLP had also adopted additional forecasting methodologies to cross-check its models and approaches;
- according to the chart in *Appendix 11*, there had been a significant decrease in the growth rate in the manufacturing industry in 1991. CLP was faced with a massive structural change at that point in time. What CLP had predicted was a very modest increase in growth compared to the very dramatic increase in growth in the preceding period;
- no forecasting methodology could predict a quadratic type of function. It would have been very misleading to make the forecasts based on the figures of the last two years. Generally, one needed to look at the long-term trends in making the forecasts; and
- the period 1991 to 1992 was an incredibly difficult time to predict both in terms of manufacturing forecasts and load factor forecasts. Had the forecasting methodology been the same as that of HEC at that time, CLP believed that it would not have been able to produce a forecast which showed the dramatic decline in the manufacturing sector.

46. In her letter of 12 May 1999 in *Appendix 14*, the **Commercial Manager, CLP Power Hong Kong Limited**, provided further information on CLP's forecasting methodology, the problems it faced in 1991 in forecasting sales and maximum demand for the period 1992 to 1998 and the recent performance of its forecasting exercises. The main points are highlighted below:

- CLP's methodology for the 1992 forecast consisted of a micro- and macro-approach for forecasting sales and a load factor approach for forecasting demand. Total electricity consumption was broken down into a sufficiently large number of economic sectors for analysis to ensure that changes in their consumption behaviour over time could be tracked with various forecasting techniques with better precision;

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- the massive industrial relocation in the early 1990s triggered by rapid economic restructuring in Hong Kong was an example to demonstrate that any U-shape or V-shape developments in a trend line could not be predicted by forecasting models of any sophistication;
- despite the prevalence of outward processing in the late 1980s, government data showed that the number of factories in Hong Kong decreased by 1.1% per annum during the period 1987 to 1991 but the decrease accelerated to 9.3% per annum during the 1992-1998 period. The number of local factories that remained in business in 1998 was only half of the 44,000 that existed in 1991. The rapid restructuring had a significant impact on CLP's sales as manufacturing sales accounted for 29% of the total local sales in 1991;
- a downward trend in the load factor persisted in CLP's supply area throughout the 1960s to early 1980s. Figure 1 of the Audit Report was truncated and did not show the longer running downward trend. The load factor forecast made by CLP in 1991 anticipated an increased usage of air-conditioning in industrial and commercial premises and an emerging phenomenon that many factories in Hong Kong effectively were deployed only in peak summer periods to meet rush orders. These factors supported a reduction in the load factor. The load factor value of 52.5% was also broadly comparable to that prevailing on Hong Kong Island;
- to test the validity of the claim that a linear time-trend projection could be more superior to the methods used by CLP, a time-trend extension was applied to the 1975-1991 manufacturing sales. The results showed that CLP's forecasting variance would have been even larger if the time-trend method had been adopted;
- electricity growth on the Hong Kong side benefited from an expansion of local commercial infrastructure, especially on Hong Kong Island. This was the main reason why the stable growth trend line of Hong Kong Island was preserved;
- the consistent application of CLP's micro/macro and load factor approaches to forecasts prepared since 1995 had produced highly satisfactory results. The recent forecast variances were mostly within 1% to 2%. Part of the reason was that the impact of manufacturing migration had diminished. Manufacturing sales now accounted for about 15% of CLP's total local sales; and
- since 1997, CLP's load forecast report had documented comparative forecasting results from alternative methods. This practice would continue.

Financial impact on customers

47. The Committee were concerned about the financial consequences to CLP's customers arising from the variance between the forecast maximum demand and the actual maximum demand for the period 1992 to 1997. After the public hearing on 4 May 1999, the Committee asked the Director of Audit to provide an assessment on the impact of CLP's excess power generation capacity on customers during the period 1992 to 1997 i.e. the effect on CLP's tariff rates and the resultant costs borne by its customers.

48. In his letter of 14 May 1999 in *Appendix 15*, the **Director of Audit** provided the Committee with the following information:

- the first power generation unit of the Black Point Project was not commissioned until mid-1996. Therefore, during the period 1992 to 1995, any excess power generation capacity could not be attributed to the implementation of the Black Point Project. There was also no available data for Audit to estimate the excess power generation capacity;
- with regard to the period from 1996 onwards, CLP's excess power generation capacity was largely due to the implementation of the Black Point Project. There were financial consequences to CLP's customers i.e. how much the customers could have overpaid in terms of tariff as a result of implementing the Black Point Project;
- based on a set of assumptions, Audit prepared the following two schedules:
 - (i) commissioning schedule of power generation units for the period 1996 to 1998; and
 - (ii) estimated costs to customers arising from the early commissioning of units 1 to 5 of the Black Point Project; and
- the commissioning schedule indicated that for a hypothetical scenario, the first power generation unit of the Black Point Project would only be required in 1998. In other words, as compared with the actual maximum demand, the first four power generation units at the Black Point Power Station had been commissioned much earlier than needed. As a result, CLP's customers had to bear additional costs amounting to \$3,387 million, representing about 3% to 7% more than what they had paid during the period 1996 to 1998.

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49. The Director of Audit stressed in his letter and subsequently at the second public hearing on 20 May 1999 that, in the absence of more relevant data, the calculations represented the best endeavour based on the limited information available to Audit, and that the figure of \$3,387 million was only a rough indication of the amount involved and should be used with caution.

50. In the light of Audit's estimation, the Committee asked whether the public had been overcharged during the period 1996 to 1998 and whether CLP and the Government should be held responsible for the additional costs borne by customers. At the public hearing and in their subsequent response to the Committee, both the Secretary for Economic Services and the Commercial Manager, CLP Power Hong Kong Limited, disputed the calculations made by the Director of Audit. The **Secretary for Economic Services** concluded that his analysis showed that:

- the assumptions [used by the Director of Audit] served more as caveats to disclaim the limitations of the hypothetical scenario and conclusions derived therefrom, rather than as a valid basis for estimation. The effect of adopting such assumptions was that it would undoubtedly overstate, possibly substantially, the additional costs borne by consumers as calculated by the Director of Audit; and
- in practice, it would not be possible to work out realistically any additional costs that might have been borne by consumers.

The **Commercial Manager, CLP Power Hong Kong Limited**, said that:

- the use of a hypothetical scenario to conclude that the company's customers had paid an additional \$3,387 million was groundless and misleading;
- CLP noted in 1993 a variance against forecast.....Agreement was reached with the Government in 1994 to defer the commissioning of units 6, 7 and 8. The commissioning of units 7 and 8 was then further deferred by three years in 1997. As a result, a total of \$4.5 billion of capital expenditure was deferred.....these deferral decisions had resulted in the lowest possible cost of power generation to the company's customers;
- CLP also cancelled or deferred a total of \$9.5 billion of capital expenditure in transmission and distribution facilities during the period 1992 to 1999. Aggressive programmes targeted at operating costs reduction brought about a

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further \$5.2 billion savings to the company's customers over the same period.....The net result was that the company's tariff levels in 1999 were 8.1% lower than those projected in the 1992 Financing Plan. The assertion that the company's customers had been overcharged was unfounded;

- CLP's tariff had been reduced by 44% in real terms since 1983 and its rate of increase was amongst the lowest of all utilities;
- the development of the Black Point Power Station had enabled CLP to secure a supply of natural gas to Hong Kong. Natural gas was a clean fuel. Since the commissioning of the Black Point Power Station, there were significant reductions in the emission levels of carbon dioxide and sulphur dioxide. The supply of natural gas was beneficial not only to the power industry but to all the people in Hong Kong;
- CLP had acted in good faith and in accordance with the SCA.....However, from the early 1990s, the migration of the manufacturing industries increased at an unforeseen speed and magnitude. As this unprecedented downturn became apparent, the company acted responsibly and prudently within the practical limits of commercial contracts; and
- CLP categorically rejected any suggestion that the company's customers had been overcharged.

The full text of the respective analyses and comments are provided in the Annex of the Secretary for Economic Services' letter of 7 June 1999 in *Appendix 9* and Annex 2 of the letter of 4 June 1999 from the Commercial Manager, CLP Power Hong Kong Limited in *Appendix 8*.

51. In his letter of 30 June 1999 in *Appendix 10*, the **Director of Audit** provided the Committee with further comments on the issue relating to Audit's estimation on the additional costs that might have been borne by consumers. The conclusions drawn by Audit are recapitulated below:

- the estimated additional costs to customers arising from the early commissioning of units 1 to 5 of the Black Point Project, as set out in Audit's letter of 14 May 1999, represented Audit's best endeavour based on the limited information available;

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- Audit considered that the figure of \$3,387 million so arrived at was a conservative one and rejected any suggestion that this figure represented a gross overstatement; and
- CLP had not produced verifiable relevant data or substantial evidence to refute Audit's estimation.

52. In response, the **Secretary for Economic Services** commented in his letter of 30 September 1999 in *Appendix 12* that:

- Audit had side-stepped a very important point i.e. to ensure reliability of electricity supply, additional power generation capacity had to be planned way ahead of time to meet future growth in demand. A forward-looking approach had to be adopted and a forecast had to be used;
- Audit's hypothetical scenario was set on the basis that accurate forecasts had been made. It assumed that forecasts were tantamount to actual outturn and used actual figures under the hypothetical scenario.....[and that] there were no contractual commitments that needed to be complied with or unwound. This was an assumption which even Audit's own forecast had shown to be unrealistic; and
- the Administration therefore had great difficulty with Audit's whole approach of working backwards to create hypothetical situations.

Provision of information to Executive Council and Legislative Council

53. From paragraphs 2.31 and 2.32 of the Audit Report, the Committee noted Audit's view that the Administration did not provide sufficient information to ExCo regarding the risk of excess power generation capacity of the Modified Gas Option (i.e. the development option proposed by CLP in its 1992 Development Plan). According to Audit, in the Memorandum seeking ExCo's approval for CLP's 1992 Development Plan and Financial Plan, the Administration did not mention that, although there was flexibility to defer the commissioning of the new power generation units in the Modified Gas Option, the flexibility was inadequate to cope with the low-growth scenario. The Committee were concerned as to whether sufficient information had been given to ExCo so that informed decisions were made.

54. The **Acting Secretary for Economic Services** informed the Committee at the public hearing on 4 May 1999 that:

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- the Administration had given all the information to ExCo, including the actual figures for 1989 to 1992 and the forecast for 1993 to 1994. The forecast was medium-term covering four to five years. It was considered reasonable at the time and ExCo was informed accordingly;
- the proposal made to ExCo was also the most economical and environmentally-friendly option, which was in line with the Government's requirements; and
- moreover, the Modified Gas Option had provided some flexibility to defer the commissioning of the new power generation units.

55. At the second public hearing on 20 May 1999, the Committee referred to paragraphs 4.5 and 4.9 of the Information Note and found that the very important factor about the relocation of the manufacturing processes outside Hong Kong was not mentioned in the LegCo Brief dated 8 October 1991 and at the motion debate on 13 November 1991. The possibility of excess power generation capacity resulting from the relocation was also not mentioned. The Committee asked whether this piece of information had been given to ExCo and why this was not brought to the attention of LegCo Members even though the issue had been extensively discussed in LegCo.

56. **The Deputy Secretary for Economic Services and Mr Eric Johnson, Principal Assistant Secretary (Economic Services)**, informed the Committee that:

- the Administration had provided ExCo with an assessment of CLP's 1992 Development Plan and Financial Plan according to the analysis made by the Government's consultant and EAD. It was pointed out in the Memorandum to ExCo that the peak electricity demand from the manufacturing sector, as compared with the commercial sector, was declining. The respective demand from these two sectors would have different impacts on the overall electricity demand; and
- the LegCo Brief of 8 October 1991 was related to the approval in principle for the reservation of the Black Point site for the construction of the power station. It was not the purpose of the paper to set out all the details of the Black Point Project.

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57. The **Secretary for Economic Services** pointed out that one should not assume that the Administration had concealed information from LegCo. He would examine the relevant papers to find out why the information on the relocation of the manufacturing sector was not mentioned in the said LegCo Brief and motion debate.

58. In his letter of 7 June 1999 in *Appendix 9*, the **Secretary for Economic Services** informed the Committee that:

- the subject matter of the motion debate on 13 November 1991, insofar as it concerned the Secretary for Economic Services, was the institutional arrangements for monitoring the operations of public utilities. It did not call for any statement by the Secretary on the relocation of the manufacturing sector outside Hong Kong. Furthermore, the matter had not been referred to during the debate. The Secretary therefore did not refer to this in her reply;
- during the debate, the Secretary pointed out that there would be continued increase in the overall electricity demand. This observation was forward-looking and borne out by facts. Sales of electricity had increased every year since 1990, despite the movement of many manufacturing enterprises to the Mainland;
- the Administration informed ExCo on 15 December 1992 that there were trends which indicated that peak electricity demand would grow faster than average electricity sales. This was due to the relative decline of industrial demand, which tended to be more evenly spread throughout the day, as against increasing demand from the commercial sector, particularly for air-conditioning, which tended to peak around the middle of the day; and
- the LegCo Brief issued on 21 December 1992 summarised the proposals considered by ExCo on 15 December 1992 and the supporting arguments and background. There was no inconsistency between the information provided in the ExCo Memorandum and that provided in the LegCo Brief. However, commercially sensitive information was omitted.

59. In order to ascertain whether there was any discrepancy in the information provided to ExCo and LegCo in 1991 and 1992, the Committee requested the Director of Audit to

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review the relevant ExCo Memoranda relating to the Black Point Project. In his letter of 2 June 1999 in *Appendix 16*, the **Director of Audit** informed the Committee that after reviewing the relevant documents, he could not find any material discrepancy in the information provided in the ExCo Memoranda and the LegCo Briefs.

Monitoring of electricity supply companies

60. In reply to the Committee's question as to whether the Government had exercised the powers provided in the SCA to monitor the operation of CLP, the **Director of Audit** said in his letter of 30 June 1999 in *Appendix 10* that:

- the Government had carried out all the financial reviews, auditing reviews and tariff reviews in accordance with the SCA in monitoring the operation of CLP during the period 1992 to 1997. However, in the current audit, Audit observed that the Government had not exercised its powers effectively, particularly in carrying out the financial review of CLP's 1992 Financial Plan;
- specifically, the Government did not address properly the inadequate flexibility provided for the timing of the commissioning of the new power generation units which brought about the risk of excess power generation capacity; and
- the Government did not mention the risk of excess power generation capacity in the Memorandum seeking ExCo's approval of CLP's 1992 Financial Plan.

The Director of Audit also pointed out that the arrangement in the interim review of the SCA should be able to reduce the risk of installing excess power generation capacity in future. The procedures below would be applied as a general rule:

- proposals for the addition of power generation capacity would be approved on an in-principle and unit-by-unit basis rather than as a series of units; and
- CLP would enter into contracts for procurement and installation of a new power generation unit only after a review of the latest forecast of the demand for electricity in consultation with the Government around three years before the expected commissioning date of the unit.

61. On the question of whether there was a mechanism in place for the Administration to monitor the electricity demand and supply situation and to take appropriate corrective action, the **Secretary for Economic Services** and the **Principal Assistant Secretary (Economic Services) Financial Monitoring** said that the Administration monitored the forecasts produced

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by the two electricity supply companies very closely and noticed the declining trend in electricity demand. An interim review was therefore conducted in 1996. The possibility of deferring the commissioning of power generation units 5, 6, 7 and 8 of the Black Point Project was discussed. In early 1997, an agreement with CLP was concluded to defer the commissioning of units 7 and 8 by at least three years. The Administration had been monitoring the situation very closely since then and was negotiating with CLP the actual commissioning date of the two power generation units.

62. Responding to the Committee's question about the deferral of the commissioning of units 7 and 8, the **Secretary for Economic Services** said that a decision would be made in the fourth quarter of 1999 as to whether the commissioning of units 7 and 8 would be deferred for three years or five years. While any arrangement would be made in accordance with the SCA and in consultation with CLP, his personal view was that the commissioning of the units should be deferred for another two years i.e. a total of five years which was the maximum period allowed for the deferral.

The formation of transmission grids

63. With a view to improving the efficiency of the total electricity generation system in the long term, the Committee asked whether the Government would consider setting up a system to motivate the electricity supply companies, including those on the Mainland, to form a power transmission grid.

64. The **Acting Secretary for Economic Services** informed the Committee at the public hearing on 4 May 1999 that the Government had commissioned a consultant to study the interlink between the two electricity supply companies and how competition in the market could be promoted. The consultancy report was being finalised and would be completed soon.

65. The **Secretary for Economic Services** informed the Committee at the second public hearing on 20 May 1999 that in considering the possibility of introducing

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interconnection in the supply of electricity, the Administration had adopted a wider and longer-term perspective. In addition to setting up interconnection between the two electricity supply companies in Hong Kong, the Administration was also considering whether more competition could be introduced into the field and whether interconnection with power plants in southern China could be established. A new monitoring system might then be required and the generation and transmission of electricity could be separated. However, all these would take time to develop and a considerable number of factors such as the regulatory framework and environmental implications were involved. The consultancy report was only a preliminary step in this direction. The Administration would consult the Economic Services Panel after the report had been finalised.

Part III : Report on “China Light and Power Black Point Project: The Government’s Monitoring of Electricity Supply Companies”

66. At the request of the Committee, the Research and Library Services Division of the LegCo Secretariat prepared the Report on “China Light and Power Black Point Project: The Government’s Monitoring of Electricity Supply Companies” (RP15/98-99) (*Appendix 17*). The main objective of the research was to find out, from available LegCo documents, information on the considerations which the Administration took into account in assessing CLP’s demand forecasts in 1992 when approval was given for the installation of additional power generation facilities at the Black Point Power Station.

67. The Report also covered information on the following areas:

- the different sources of electricity generated/purchased by CLP and the different customers of CLP;
- the unit cost of electricity generated by CLP in Hong Kong and the distribution and transmission costs of the nuclear electricity purchased from the Mainland; and
- whether CLP or the Administration was aware of the fact that establishments in the manufacturing sector were relocating from Hong Kong to China when CLP decided to participate in the Daya Bay project.

68. The executive summary of the Report is extracted below:

- available LegCo records showed that when approval was given in December 1992 for the installation of additional power generation facilities at Black Point, Burns & Roe and the Administration had examined carefully the sales forecast and forecast of maximum demand for Hong Kong produced by CLP and concluded that they were reasonable. Although the Government took two and a half years between 1990 and 1992 to consider proposals from CLP, it was not clear how the Government conducted its demand forecasts in assessing CLP’s proposals;
- the manufacturing sector in Hong Kong had begun to shrink since the 1980s. The proportion of electricity distributed to the industrial sector dropped from 37% of the total electricity supplied in 1980 to 22% in 1992. Between 1980 and 1992, except for the printing and publishing industry, all key industries in the

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manufacturing sector experienced a decline. In this period, the number of establishments in the manufacturing sector decreased by 5.8% from over 45,000 to 42,000 and the number of persons engaged dropped by 38% from 0.91 million to 0.56 million;

- two-thirds of the electricity sold by CLP in Hong Kong was generated by Castle Peak Power Company Limited, of which 40% was owned by CLP. The remaining one-third of the electricity sold by CLP in Hong Kong was purchased from Guangdong Nuclear Power Station (GNPS) at Daya Bay. The quantity of electricity purchased from Daya Bay was equivalent to about 70% of its output as a contractual obligation of CLP between 1994 and 2014. However, this purchase was not regulated by the SCA between CLP and the Hong Kong Government;
- CLP also sold electricity to neighbouring Guangdong Province and Shekou. Sales to the Mainland had increased since 1990 and peaked in 1993, after which it fell dramatically. The increase in sales was due to increased demand and the substantial drop was brought about by the commissioning of additional power generation facilities in Guangdong Province. In the past three years, CLP's sales of electricity to the Mainland accounted for about 7% of its purchase of nuclear electricity from the Mainland. In 1998, CLP's non-SCA revenue from sales of electricity was \$0.3 billion while CLP's SCA revenue from sales of electricity was \$22.5 billion; and
- the Government reported that it did not take into account CLP's sales of electricity to the Mainland when assessing CLP's proposals for the Black Point Project in December 1992.

69. In his letter of 30 September 1999 in *Appendix 18*, the **Government Economist** pointed out that:

- only two relevant basic economic indicators (i.e. the number of establishments and employment in the local manufacturing sector) were used in the analysis of the relocation of manufacturing processes to the Mainland and the decline in relative importance of the local manufacturing sector in the Report. This was considered inadequate. In relation to the demand for electricity, the level of industrial output and the volume of domestic exports should be more pertinent basic indicators; and

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- two important observations were omitted from the Report:
 - (i) the volume of domestic exports and the Index of Industrial Production indicated that local manufacturing output increased for most of the years during the period 1980 to 1992, and in some of the years, the increase was significant; and
 - (ii) all the four basic indicators, namely the volume of domestic exports, Index of Industrial Production, number of manufacturing establishments and number of manufacturing employment, showed that the extent of decline in local industrial activity that had occurred after 1992 was far greater than could have been inferred from those historical data over the earlier period 1980-1992.

70. **Ms Eva LIU, Head, Research and Library Services, Legislative Council Secretariat**, pointed out in her memorandum of 2 October 1999 to the Committee in *Appendix 19* that:

- the information referred to by the Government Economist was contained in the Information Note prepared by the Research and Library Services Division earlier (*Appendix 6*);
- for the figures relating to the Index of Industrial Production as set out in Table 4 and Charts 6 and 7 of the Information Note, it might be more valid to consider three points, namely, an increase of over 14% until 1987, an obvious slow-down in 1988 which had nothing to do with the Gulf War or unusual events in China, and an almost flat growth of less than 1% during the period 1989 to 1992 when CLP's proposals for additional power generation facilities at the Black Point Power Station was considered. It did not appear prudent to use the average of a trend of 12 years (1981-1992) to make a projection when fluctuations in the period were in the order of over 20%. It might be more prudent to adopt three scenarios for consideration for planning purpose i.e. high, main and low growth; and
- for the figures relating to the volume of domestic exports as set out in Table 5 and Charts 8 and 9 of the Information Note, it should be noted that three similar points with a watershed year in 1987 could be observed. A slow-down occurred in 1988 and an almost no-growth period occurred between 1989 and 1992. This should have led policy-makers at the end of 1992 to be aware of stagnant consumption of electricity by the industrial sector in 1989-1992.

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71. In his letter of 22 October 1999 in *Appendix 20*, the **Director of Audit** also pointed out that the Index of Industrial Production had not been used by EAD as the basic parameter for projecting the industrial consumption of electricity in 1992. This was inconsistent with the Government Economist's statement that in relation to the demand for electricity, the Index of Industrial Production and the volume of domestic exports were more pertinent than the number of manufacturing establishments and the number of manufacturing employment.

72. On Part 3 and Part 4 of the Report, the **Secretary for Economic Services** commented in his letter of 2 October 1999 in *Appendix 21* that:

- the Administration saw no relevance between CLP's participation in the Daya Bay Nuclear Power Project and the issue of excess power generation capacity relating to CLP's 1992 Development Plan and Financial Plan. The Black Point Project was assessed purely on the basis of forecast electricity demand in CLP's supply area and with a view to meeting established reliability levels. It should also be noted that 70% of the power generation capacity of the Daya Bay units expected then to be commissioned in 1994 and 1995 had been taken into account in determining the need for the Black Point Project; and
- the forecast which was used to determine the power generation capacity required took no account of demand for electricity in the Mainland. Sales of electricity to the Mainland were only made by using standby capacity. If the standby capacity was required at any time, priority would be given to meeting the needs of consumers in Hong Kong.

Part IV : Evidence taken at the public hearing held on 4 October 1999

Opening statement

73. At the third public hearing on 4 October 1999, **the Hon Mrs Anson CHAN, Chief Secretary for Administration (former Secretary for Economic Services during the period 1987 to 1993)**, made an opening statement and said that:

- in monitoring electricity supply companies, it had always been the Government's policy to ensure that consumers received a reliable and sufficient supply of electricity at a reasonable price under the SCA. The Government assessed CLP's 1992 Development Plan and Financial Plan with a view to establishing whether the proposals were justified and consistent with these objectives. With the help of an independent consultant and EAD, the Administration considered all relevant factors including not only the overall trend of electricity demand as observed over the past decade, but also the factors that might affect Hong Kong's economic activities, thereby impacting on electricity demand. These factors included the uncertainties brought about by the cyclical slow-down in the Hong Kong economy, the macro-economic adjustment taking place in the Mainland, the outbreak of the Gulf War and the recession in the United States. After detailed analysis of relevant factors, the Administration concluded at the time that CLP's forecast was within reasonable bounds. Moreover, among various options put forward by CLP, the Administration also recommended to ExCo to adopt the Modified Gas Option as it was the most economical and environmentally-friendly option;
- the Government was aware that some manufacturers had gradually relocated their operations to the Mainland and took that into account in making its independent forecast. However, the Government did not foresee at the time the future pace and magnitude of this relocation, which intensified markedly after 1992. The Government Economist had provided the Committee with information which showed that local industrial output continued to increase for most of the period 1980 to 1992 at 5.6% per annum on average, and that the absolute shrinkage of the local manufacturing sector occurred more distinctly only after 1992. The Administration considered CLP's forecast reasonable taking into account all the information available at the time, including the slower pace of growth in electricity consumption of the manufacturing sector as compared with the commercial sector, and the fact that CLP adjusted downwards their sales forecast for the manufacturing sector from the actual growth rate of 3.6% for 1987-1991 to 0.9% per year. The Government Economist had also pointed out that for long-term projections of electricity

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demand, it would not have been prudent to project electricity demand for eight years after 1991 mostly on the basis of figures for 1989 to 1991;

- it turned out that both CLP's forecast and EAD's forecast proved to be higher than actual consumption. However, it should be recognised that there was no guarantee that a forecast would be 100% accurate. The key question was whether the Government had made an in-depth analysis and reasonable assessment of all available figures and information at the time. Having done so and in the light of the advice provided by the independent consultant and EAD, the Administration concluded that CLP's 1992 Development Plan was the best option;
- following approval of CLP's 1992 Development Plan and Financial Plan, the Government conducted regular reviews on the demand and supply of electricity and, if necessary, made amendments to the plan in accordance with the framework laid down in the SCA. Once it became apparent in the course of the 1993 auditing review that demand was not reaching the forecast level, a number of remedial actions were taken. CLP was requested to study urgently how the excess power generation capacity could be reduced and contractual options for deferring the commissioning of some of the units at the Black Point Power Station could be exercised. Subsequently, the Government and CLP agreed that the commissioning of units 7 and 8 at the Black Point Power Station would be deferred by three years to 2003 and 2004 respectively with the possibility of deferral by a further two years. ESB was currently reviewing the situation with CLP with a view to deciding the way forward before the end of this year;
- for the future, the Administration agreed that consumers should have greater protection. To this end, the Government had agreed with the electricity supply companies during the recent interim review of the SCAs that part of the investment in any power generation units approved in future would not provide a return to shareholders if, on commissioning, the units proved to be excessive to requirements. Furthermore, to minimise the chance of providing excess power generation capacity in the first place, it was agreed that, as a general rule, future additions of power generation capacity would be approved on an in-principle and unit-by-unit basis rather than as a series of units. In addition, the electricity supply companies would only enter into contracts for procurement and installation of the new power generation unit after a review of the latest demand forecast in consultation with the Government;
- it was noted that the Director of Audit was asked by the Committee to ascertain the additional costs that might have been borne by consumers as a result of the

excess power generation capacity which had arisen. Whilst the Director had come up with a figure, it should be noted that, in doing so, he used the actual outturn with the benefit of hindsight and qualified the figure produced with many assumptions which he himself acknowledged could be challenged. The Administration found his assumptions, and indeed his whole approach, to be inconsistent with the reality of practical business operations. Therefore, it would be unfair to the Government, CLP and consumers for the Committee to draw any conclusions on additional costs that might have arisen on that basis. Even the "best-fit line" projection prepared by the Director of Audit using historical data was also higher than the actual outturn, for example, by over 9% for 1997. This illustrated that there was bound to be a certain degree of uncertainty in projecting forecasts; and

- in conclusion, in assessing CLP's Development Plan and Financial Plan, the Administration did consider all relevant factors at that point in time. However, the forecast turned out to be higher than actual demand. It was hoped that the Committee would appreciate that no forecasting methodology could ensure 100% accuracy. At the same time, it should not be forgotten that ensuring reliability of electricity supply and adequate power generation capacity to meet future demand was also of paramount importance. Any blackout and brownout arising from inadequate power generation capacity would certainly be unacceptable to the Committee and the community at large. All these factors should be taken into account in considering the issue after the event.

Forecast variance and excess power generation capacity

74. In reply to the Committee's question as to whether the reserve power generation capacity of CLP was too high, as reflected in its reserve margin which was persistently higher than 35% during the period 1990 to 1997, the **Chief Secretary for Administration** said that:

- when CLP's Development Plan and Financial Plan for the period 1992 to 1999 was considered, the Administration could only do its best forecasting based on the information available at the time and taking into account all the factors that were outlined in the opening statement;
- it was unfortunate that in the event, the actual maximum demand was below the forecast maximum demand even under the low-growth scenario. However, the pertinent facts to consider were whether the Administration had given due consideration to the available information and all reasonable factors, whether it

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had exercised due care in arriving at its assessment and whether it had done everything it could possibly do to prevent over-supply of power generation capacity; and

- the policy objective of the Government was to ensure that consumers received a reliable supply of electricity at reasonable prices. The electricity supply company and the Government had a duty at all times to ensure that the peak hour demand could be met.

75. The Committee noted from the previous comments made by the Government Economist that in its forecast of electricity demand, EAD made a projection for the period 1992 to 1999 on the basis of figures mainly relating to the Index of Industrial Production and the volume of domestic exports for the preceding ten-year period. While the figures for the first seven years were on the increase, those for the last three years were declining. In this regard, the Committee asked the Chief Secretary for Administration whether the Administration had taken into account the changes during the period 1989 to 1991 when it considered CLP's Development Plan and Financial Plan in 1992. The **Chief Secretary for Administration** said that:

- the forecasting exercise carried out by EAD on electricity demand was based on both actual figures in the preceding few years and the figures of a longer time span of ten years. It had also made the best estimate of what was likely to happen in the eight years covered by the 1992 Development Plan and Financial Plan, having regard to the factors outlined in the above paragraphs; and
- it was also an established fact that the relocation of manufacturing industries across the border was not a very marked trend until the end of 1992. By that time, the Administration had taken a view and had secured ExCo's approval of the Development Plan and Financing Plan.

76. The **Government Economist** supplemented that:

- it was true that the volume of domestic exports and the local manufacturing output from 1989 to 1991 were rather low in terms of growth. However, the average growth rate for the preceding three years i.e. 1986 to 1988 was a

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double-digit figure, and the decline became apparent only after 1992; and

- although there was also some uncertainty in the economic situation during the period 1989 to 1991, the economy had been very strong in the preceding three years. That was why EAD took the view that it should not focus on the figures of the three years immediately before 1992, but should take a longer time span into account.

77. Referring to Table 1 of the LegCo Report (RP15/98-99) in *Appendix 17*, the Committee noted that the proportion of electricity distributed to the industrial sector decreased from 37.4% in 1980 to 27% in 1990. As these figures clearly showed that the demand from the industrial sector was declining, the Committee asked how the Administration could still maintain that the declining trend only started in the three years preceding 1992.

78. The **Government Economist** said that the decline in the proportion of electricity distributed to the industrial sector was only in relative terms. In fact, there was a significant increase in the actual sales of electricity during that period. The conclusion that could be drawn from Table 1 of the Report was that the growth in demand by other sectors was much higher than that of the industrial sector.

79. The **Chief Secretary for Administration** added that:

- when the Administration submitted its recommendations to ExCo, it noted on the one hand that the growth in demand from the industrial sector would moderate. But on the other hand, the demand from the commercial sector would be proportionally higher; and
- it should also be noted that in terms of the usage of electricity, industrial use was more evenly spread throughout the day whereas commercial use tended to peak around mid-day. Meeting the peak hour demand was therefore one of the very important objectives of the Administration.

80. The Committee also asked why the Administration still forecast an increase in electricity demand from the industrial sector while CLP had recognised the declining trend in the late 1980s and revealed in its 1988 Annual Report that “sales of electricity to the manufacturing sector showed a smaller increase of 4.4%, reflecting the slow-down in manufacturing activities in the year”. The **Chief Secretary for Administration** explained

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that:

- the Administration had relied on two independent verification exercises to cross-check CLP's forecasts, i.e. the forecasting exercise conducted by EAD and the assessment conducted by the Government's consultant. It was the collective view that CLP's forecast of the average annual growth in maximum demand for the period 1992 to 1999 was within reasonable bounds; and
- both CLP and the Administration had taken into account the trend of the manufacturing sector relocating outside Hong Kong in their respective forecast and assessment. However, based on the information available at the time, it was not anticipated that the relocation process would accelerate so fast. That was the only area where the Administration had gone wrong in the event.

81. The Committee noted that at the motion debate on 11 November 1991, the Chief Secretary for Administration, in her former capacity as Secretary for Economic Services, advised Members of the then LegCo that the SCAs with the electricity supply companies were desirable because the electricity demand forecasts had been carefully scrutinised by the Administration and the tariff levels had only increased by 12% on average in the 1980s. However, since the conclusion of the SCAs, significant variances between the forecasts and the actual demand were found and CLP's electricity charges had actually increased by 50% during the period 1992 to 1998. The Committee asked whether there was an explanation for this phenomenon.

82. The **Chief Secretary for Administration** agreed that in the event, the forecast demand was much higher than the actual demand. However, it should be noted that the tariffs paid by CLP's customers were 8.1% lower than those approved in the 1992 Financial Plan. While there was an 80% increase in inflation during the period 1991 to 1998, CLP's tariff only increased by 57%.

Provision of information to Executive Council and Legislative Council

83. From paragraph 2.31 of the Audit Report, the Committee noted Audit's view that although there was flexibility to defer the commissioning of the new power generation units in the Modified Gas Option, the flexibility was inadequate to cope with the low-growth scenario. According to Appendix G of the Audit Report, the actual maximum demand for the period

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1992 to 1997 was persistently lower than the forecast maximum demand under the low-growth scenario. In paragraph 2.32, Audit considered that the Administration did not provide sufficient information to ExCo regarding the risk of excess power generation capacity of the Modified Gas Option. Having regard to the fact that CLP had also produced the low-growth forecasts for the Administration's consideration, the Committee asked why this information was not given to enable ExCo to make an informed decision which would have a significant impact on the burden borne by CLP's customers.

84. The **Chief Secretary for Administration** said that:

- given the information available at the time and with its best endeavour to assess the forecasts through the Government's independent consultant and EAD, the Administration took the view that CLP's main load forecast was within reasonable bounds. There was no reason and no motive for the Administration to be too optimistic or too pessimistic. It had to take a view on what was a reasonable scenario;
- the Administration also took into account the fact that CLP's 1992 Development Plan and Financial Plan had built in some flexibility to defer the commissioning of four of the power generation units by up to two years. The policy objective of ensuring an adequate and reliable supply of electricity at reasonable cost and meeting the peak hour demand were relevant considerations;
- insofar as the ExCo Memorandum was concerned, it was a matter of judgement as to how much information should be put into the document. The principle that had always been adopted in preparing ExCo Memoranda was that attempts should be made to include in the Memoranda as much and accurate information as was necessary to enable ExCo to come to a reasoned decision. There was certainly no attempt whatsoever to distort or to give misleading facts. The Administration had made the best judgement it could at the time. There was no motive and no reason to try to hide pertinent facts from ExCo. The ExCo Memorandum and all the appendices were already very voluminous;
- the assessment of development plans and financial plans submitted by the two electricity supply companies and the preparation of the ExCo Memoranda had involved a great deal of work. There was an extremely long and protracted discussion in ExCo when CLP's 1992 Development Plan and Financial Plan were considered. Many questions were raised in respect of the accuracy and reliability of the various forecasts; and

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- she [Chief Secretary for Administration] accepted that there was no mention of the low-growth scenario and of the fact that the flexibility built into the Development Plan did not cater for this scenario. However, she did not have total recall of what happened seven years ago. She was relying on her best memory supplemented by the records that she had read. Hence, the fact that this information was not in the ExCo Memorandum was not conclusive evidence that it had not been raised or discussed during the ExCo meeting. ExCo decisions were not recorded verbatim. All that the Director of Audit could do was to assess the information which was available in the records and to come to a conclusion. But he could not assess what was not there.

85. The Committee noted that in the debate on Hon LAU Chin-shek's motion on 13 November 1991, the Chief Secretary for Administration, in her former capacity as Secretary for Economic Services, had emphasised that the Administration had exercised caution in the negotiations with CLP and had focused on consumers' interests. If this was true, the Committee asked whether ExCo had been informed of the possibility of consumers being overcharged as a result of the risk of excess power generation capacity in the Modified Gas Option.

86. The **Chief Secretary for Administration** said that she thought the Administration did supply this information to ExCo. She also said that:

- in coming to the conclusion that the Modified Gas Option was the best one from the consumers' point of view, the Administration took into account not only the economic benefit but also the impact on the environment. At the end of the day, it was a trade-off between the degree of flexibility that should be allowed and the total economic benefit to the consumers; and
- the Administration had always hoped that the forecasts would be reasonably accurate so that the adverse impact on consumers would not arise. Unfortunately, in the event, it did arise.

87. In reply to the Committee's question as to whether there had been lessons learned, the **Chief Secretary for Administration** said that:

- insofar as the development plan was concerned, particularly about approving additional power generation capacity and the timing for installing the capacity, there should be greater flexibility so that each power generation unit could be approved on the basis of accurate electricity demand forecasts; and

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- the Administration had since then taken into account the trend of the manufacturing industries moving across the border. It was discussing with CLP the possibility of further deferring the commissioning of the last two power generation units of the Black Point Project.

Assessment of CLP's 1992 Development Plan and Financial Plan and documentation of the decision-making process

88. The Committee noted Audit's observation that the maximum demand forecast variance was, to a larger extent, due to the load factor forecast variance rather than to the sales forecast variance for the manufacturing sector. According to paragraph 2.10 of the Audit Report, the Administration had relied on the Government's consultant to assess CLP's 1992 Development Plan, and the Government's consultant considered that there was no reason to question CLP's projection of the load factor. The Committee also noted from paragraph 4.14 of the Audit Report that EAD had examined the forecast results of alternative approaches, although such results were not documented when the final assessment was forwarded to ESB. In view of the fact that the Administration had an important role to play in monitoring the performance of electricity supply companies, the Committee asked:

- what the Administration had done to vet the forecasts produced by CLP in addition to the work performed by the Government's consultant;
- why EAD had accepted CLP's load factor forecast, even though the Government's consultant had warned that there was some uncertainty about the load factor approach when it was applied to a situation with a dynamically changing load factor;
- whether EAD had carried out its own sensitivity tests to analyse the costs to customers under the various development options, especially when CLP had produced various forecasts under different scenarios i.e. high, main and low growth; and
- why the forecast results of alternative approaches had not been properly documented by EAD.

89. The **Chief Secretary for Administration** said that:

- she agreed that the Government had a monitoring role and should make its best endeavours to discharge that role conscientiously and effectively, and be held

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accountable for its actions;

- she could recollect distinctly that she and her colleagues in ESB and EAD had spent many months studying CLP's 1992 Development Plan and Financial Plan. They had not simply accepted CLP's forecasts but had extensive discussions on their accuracy. In many instances, they had taken opposite views from that of the company. The conclusion drawn from the two independent studies was that CLP's forecasts were within reasonable bounds;
- having regard to the policy objective, the overall benefit to consumers and the impact on the environment, the Administration considered that on the whole, it could accept the company's forecasts and approve the Modified Gas Option; and
- it was true that not all of the internal discussions were documented. In considering documenting internal discussions, the Administration should have regard to doing its work according to its conscience and having exercised due diligence and care. It should not be too concerned about being blamed for fault later on. The real question was whether at the time the Administration had made every possible effort to verify CLP's forecasts. Notwithstanding that, the Administration would ensure that the internal discussions would be fully documented in future.

90. The **Government Economist** also said that:

- EAD had accepted Audit's recommendation that it should record and present the cross-checking results of different approaches in its reports on electricity demand projections. Records had been kept on the more recent forecasts;
- EAD had used both the load factor approach and the sectoral approach in producing its independent forecasts. This methodology was more comprehensive because all relevant information could be taken into account. On the contrary, the time-trend model as proposed by Audit might not be able to capture all information relevant to the forecasts of electricity demand. In any case, EAD would consider Audit's recommendation and compare the results of different forecasting approaches and methodologies;

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- it should also be noted that however precise a forecasting methodology could be, no one could guarantee that the forecast would tally with the actual situation because there were circumstantial changes which could give rise to variances. Moreover, the experience in other countries revealed that the more sophisticated the forecasting methodologies, the greater the risk of variance would be because too many factors might have been considered; and
- it was true that EAD and CLP had different views on the trend of the load factor. That was why the Government employed a consultant to provide an independent assessment of CLP's 1992 Development Plan, which included a review of the company's load factor assumptions. In the event, the Government's consultant came to the view that there was no reason to question CLP's projection of the load factor.

91. The Committee asked whether sufficient regard had been paid to the low-growth scenario and, in addition to the possibility of deferring the commissioning of the power generation units, whether more flexibility and a contingency plan should have been included in the Modified Gas Option. The **Deputy Secretary for Economic Services** said that even if more flexibility had been included, there would still have been excess power generation capacity because the actual demand had turned out to be lower than the forecast demand under the low-growth scenario. The **Chief Secretary for Administration** also said that the issue to be considered was that the more flexibility there was, the higher price one had to pay. Nevertheless, the lesson learned was that if more flexibility were to be included in future projects, the price that had to be paid would have to be carefully assessed.

Financial impact on customers

92. In the light of CLP's significant excess power generation capacity as reflected in its persistently high reserve margin which was in the range of 50% to 60% and the relationship between the net fixed assets and the tariffs paid by customers, the Committee asked whether the public had been overcharged, be it just one cent.

93. The **Chief Secretary for Administration** said that:

- it was very difficult to pass a judgement on whether the consumers in the event had paid more than they should, and if so by how much, because it was a trade-off at the time. The Administration made the best judgement it possibly could on the forecasts. The Modified Gas Option should be considered as the best package in terms of economic benefit and the impact on the environment; and

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- it should be noted that in accepting the Modified Gas Option, there was a cost benefit of \$4 billion. If the Administration had insisted on including more flexibility in the timing of the commissioning of the power generation units, it would mean that the consumers would have had to forego some of the \$4 billion. The exact amount would not be known as a hypothetical situation was being considered.

94. The Committee noted that the Secretary for Economic Services, in his letter of 7 June 1999 in *Appendix 9*, disputed the calculations made by Audit in respect of the additional costs borne by customers. In her letter of 4 June 1999 in *Appendix 8*, the Commercial Manager, CLP Power Hong Kong Limited, also rejected any suggestion that the company's customers had been overcharged. On the other hand, the Director of Audit insisted in his letter of 30 June 1999 in *Appendix 10* that the figure of \$3,387 million represented Audit's best endeavour based on the limited information available and that it was a conservative one. He also rejected any suggestion that this figure represented a gross overstatement. In the light of the above, the Committee asked whether CLP's customers had been overcharged and whether verifiable relevant data would be made available to enable Audit to make a more accurate estimate.

95. The **Managing Director, CLP Power Hong Kong Limited**, said that:

- CLP categorically denied that it had overcharged its customers. The amount of \$3.4 billion was worked out based on a theoretical calculation with the benefit of hindsight. There were the assumptions that in 1992, CLP could have chosen the perfect timing to install each of the power generation units to exactly match the demand profile and that it could arrange the plant and gas supply contracts in such a way that the plant and the right amount of gas would be available at the right time. These assumptions were not realistic;
- CLP had made the decision on the best available information at the time. It could not have incorporated greater flexibility without incurring significant additional costs; and
- CLP had responded to the decline in electricity demand and reduced the tariffs to such levels that they were 8% below those approved in the 1992 Financial Plan. As a result, CLP's average tariffs were the lowest in Hong Kong. It was therefore misleading to characterise Audit's estimate as an overcharge.

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96. The **Secretary for Economic Services** also said that:

- Audit's estimate was based on a set of assumptions which were not realistic. For example, Audit assumed that forecasts were tantamount to actual outturn and that there was no contractual commitment to be complied with. In reality, forecasts could not be 100% accurate and even the "best-fit line" suggested by Audit was more optimistic than the actual maximum demand. Furthermore, damages would have to be paid if the relevant contracts were varied; and
- hence, it was misleading for Audit to put forth the view that the early commissioning of the power generation units had resulted in consumers being overcharged by \$3.4 billion.

97. The **Government Economist** added that the Black Point Project was a major investment item which involved the ordering and purchasing of machinery well in advance of construction. As soon as the contracts were concluded, the flexibility within the development option was substantially reduced because any changes in the contracts would involve substantial additional costs. Audit's estimate of \$3.4 billion was therefore open to question.

98. On the same question, the **Director of Audit** said that:

- Audit's estimate was based on the timing of the commissioning of the power generation units and the level of CLP's reserve margin. The figure of \$3.4 billion was only a rough estimate because Audit did not have any information on the contracts and production costs. He hoped that CLP could provide Audit with the necessary information and pin-point the mistakes in the calculation;
- Audit's estimate would serve as a starting point for discussion. One of the assumptions adopted in the estimate was that the relevant information was available at the time. If more work had been done to phase the commissioning of the power generation units, then consumers would not have been overcharged as much; and
- Audit had never recommended the "best-fit line" to be the best methodology to produce the forecasts. Audit only considered that "best-fit line" and the time-trend model were two simple methods which could be used to cross-check the forecasting results.

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99. The **Managing Director, CLP Power Hong Kong Limited**, further said that:

- it was not a fact that CLP was unwilling to provide the necessary information. It was just that the information was not available because a hypothetical situation was being considered. For example, there was no mechanism within the gas supply contracts to calculate the costs involved in deferring the commissioning of the power generation units; and
- as soon as a decision was made, CLP was locked into the terms of the contracts. It was therefore more relevant for the company to look at the actual situation and to respond to that, such as by deferring the commissioning of some of the power generation units and reducing its operating costs and other capital expenditure. As a result of these efforts, a total of \$19 billion was saved and the tariffs were lower than those projected. The net result for customers was that they had not been paying more than that was intended under the 1992 Financial Plan.

100. From page 23 of the LegCo Report (RP15/98-99) in *Appendix 17*, the Committee noted that in a speech on the motion "CLP's Excess Generating Capacity and the Scheme of Control Agreement" on 19 March 1997, the then Secretary for Economic Services had made the following remarks:

- "I do not intend to comment on whether or not the blame of inaccurate forecast should be put on the Government";
- "Facts now prove that the forecast at that time was inaccurate. As a responsible public utility company, the CLP should definitely shoulder the responsibility to the society for the commercial decision it made and take appropriate measures to protect the interests of its customers"; and
- "I hope that the CLP and the Castle Peak Power Company Limited can come to a decision as soon as possible and bear the responsibility for the consequences of their overestimating the electricity demand back then. I hope that they would give a satisfactory explanation to the customers and the community so that their long-standing good reputation can be maintained."

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With reference to these remarks, the Committee asked the Secretary for Economic Services:

- whether, after a lapse of two years, he could explain in clearer terms whether it was the Administration or CLP who should be held responsible as it was indisputable that the forecasts were inaccurate and there was excess power generation capacity; and
- what remedial measures he would propose to redress the erroneous forecasts.

101. The **Secretary for Economic Services** said that:

- an important point to note was that the Administration had to ensure a reliable supply of electricity and that additional power generation capacity had to be planned ahead of time to meet future growth in demand. The Administration would be taken to task if any blackout arose from inadequate power generation capacity;
- he agreed that the forecasts were on the high side. However, it should be noted that the Administration had made a reasonable decision based on the information available at the time and with the assistance of the Government's independent consultant and EAD. This was the responsibility which the Administration assumed; and
- the fact that the forecasts were not proved to be 100% accurate after the event should not form the grounds on which to hold someone responsible. The most important point was that when the variance between the forecasts and the actual outturn was found in 1993, the Administration had asked CLP to defer the commissioning of units 6, 7 and 8 of the Black Point Project. Adjustments had also been made to the SCA after the interim review. All these went to show that the Administration did try its best to learn from the experience and to improve the situation.

102. In the light of this explanation, the Committee asked how the figure of \$3.4 billion, which was considered very conservative by Audit, should be interpreted. The **Deputy Secretary for Economic Services** said that:

- the Administration had great difficulty with Audit's whole approach of working backwards to create the hypothetical situation. There were doubts as to whether the assumptions adopted by Audit were valid or reasonable; and

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- the fact that there was variance between the forecast demand and the actual outturn should be distinguished from the question as to whether the original forecasts were within reasonable bounds. The forecasts were based on the best information available at the time and were considered to be within reasonable bounds. The variance was evident subsequently when the circumstances had changed over time.

103. The **Managing Director, CLP Power Hong Kong Limited**, also said that another angle to approach the issue was to consider the point of reference from where the alleged overcharge was calculated. From CLP's perspective, the baseline had to be the costs and the tariffs as set out in the 1992 Financial Plan. Since 1992, the company's tariffs had been consistently below those approved in the Financial Plan. Therefore, it could not be said that CLP had overcharged its customers. The company had also acted responsibly to effect improvements and efficiency within the organisation to counter the lower sales of electricity which were not foreseen.

104. The **Chief Secretary for Administration** added that whatever the dispute, there was one point which was indisputable. That was the fact that Audit's alleged overcharging of \$3.4 billion was worked out on the basis of figures known to Audit after the event. It was also worked out on a number of assumptions with which the Administration had great difficulty. If these assumptions could be challenged, then it followed that there should be, at the very least, considerable doubt about the accuracy of the alleged overcharging of \$3.4 billion.

Guangdong Nuclear Power Station

105. The Committee noted from paragraph 7.6 of the LegCo Report (RP15/98-99) in **Appendix 17** that the total purchase of electricity from GNPS had increased by 21% between 1994 and 1998, which accounted for one-third of CLP's total electricity sales in Hong Kong. The Committee also noted the remarks made by Lord Kadoorie, Chairman of CLP, in 1985 that the purchase of nuclear power would assist in meeting projected demand for electricity in the 1990s and would permit the deferment of a decision to proceed with the construction of another power station (page 42 of RP15/98-99). Against this background, the Committee asked whether there was a need to decide in 1992 to build the Black Point Power Station. The Committee also asked whether the Administration, in approving the Black Point Project, had taken into consideration the fact that the GNPS, a major source of electricity to Hong Kong,

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was outside the SCA.

106. The **Secretary for Economic Services** said that:

- the decision to build the GNPS was made in 1985. The Finance Committee of the then LegCo had been clearly informed that 70% of the electricity generated from this power station would be supplied to Hong Kong;
- the supply of electricity from the GNPS upon its commissioning had been factored in when the Black Point Project was considered. The excess power generation capacity under discussion was therefore not a result of purchase of electricity from the GNPS;
- there was a lapse of seven years between 1985 and 1992. There had been double-digit growth in maximum demand during this period. As circumstances kept changing, there was a need to review the earlier forecasts and to carry out more up-to-date forecasts; and
- it could be said that the GNPS had been included in the SCA because the cost of electricity purchased from the GNPS would represent part of the overall cost for electricity generation and form part of the tariffs.

107. The **Chief Secretary for Administration** added that the Administration would consider whether the electricity supply from the GNPS should be included in the SCA when negotiating a new agreement with CLP.

Subsequent correspondence

108. The **Chief Secretary for Administration** reiterated the following points in her letter of 13 October 1999 in *Appendix 22* that:

- the Administration should not be blamed for making a forecast which proved to be inaccurate after the event;
- the Administration considered that it had discharged its monitoring role conscientiously when assessing CLP's proposals;
- the Modified Gas Option saved consumers \$4 billion and was the most

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environmentally-friendly option under all scenarios;

- once the Administration knew that the actual demand was below the forecast demand, it took all remedial actions possible to rectify the situation; and
- the Administration did not consider the Director of Audit's methodology of estimating additional costs that might have been borne by consumers as appropriate or realistic.

109. The letter also enclosed the following documents requested by the Committee:

- records of meetings and correspondence which demonstrate the efforts made and some of the considerations taken into account by the Administration before arriving at the final conclusions;
- the current SCA with CLP, together with the Supplemental Agreement with CLP arising out of the 1997/98 Interim Review;
- the Consultancy Report prepared by Burns & Roe in 1992; and
- EAD's assessment of CLP's electricity demand forecast for 1992-1999, dated 17 March 1992.

110. In his letter of 13 October 1999 in *Appendix 23*, the **Managing Director, CLP Power Hong Kong Limited**, provided the Committee with additional information on the key assumptions behind the load factors forecast in the 1992 Financial Plan. In another letter dated 13 October 1999 in *Appendix 24*, he explained once again why the allegation that CLP's customers had been overcharged \$3.4 billion as a result of the 1992 decision authorising the construction of the Black Point Power Station was unfounded and unfair.

111. At the request of the Committee, the **Director of Audit**, in his letters of 13 October 1999 and 20 October 1999 in *Appendices 25* and *26*, estimated the financial impact on CLP's customers between the different scenarios and the actual situation during the period 1996 to 1998. Audit had also compared the actual maximum demand with the forecast

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maximum demand under the various scenarios and found that the former was persistently lower than the latter under the different scenarios.

112. The **Director of Audit**, in his letter of 22 October 1999 in *Appendix 20*, provided the Committee with further comments on the respective responses of the Administration and CLP. Audit concluded that based on the available information:

- Audit was not satisfied that the Administration had taken adequate action to critically and rigorously vet and cross-check CLP's forecasts;
- Audit considered that the Administration's assessment of CLP's forecasts was not soundly based, having regard to all the relevant information available in 1992; and
- Audit considered that it was an undeniable fact that there had been considerable excess power generation capacity arising from the early commissioning of units 1 to 5 of the Black Point Project. Based on the SCA, the excess assets were charged to CLP's customers. Therefore, Audit considered that the customers had been overcharged.

113. In reply to the Committee's request for further evidence to substantiate the Administration's claim that, in assessing CLP's 1992 Development Plan and Financial Plan, the Administration at the time had discharged its monitoring role conscientiously and effectively, the **Chief Secretary for Administration** said in her letter of 5 November 1999 in *Appendix 27* that:

- there was no further useful documentation that the Administration could add to what it had already given to the Committee;
- it had been made clear at the public hearing that there were considerable discussions within the then ESB as to what recommendations should be put to ExCo. The LegCo Brief itself was the documentation of the outcome of those

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discussions and the discussions at ExCo;

- as the head of ESB then, she was closely involved in overseeing and monitoring the progress of the study of CLP's proposals and in deciding how to take the proposals forward. Within a span of eleven months, there were numerous exchanges or discussions at different levels within the Branch, and among ESB officials, CLP and the Government's independent consultant. She would not expect to be able to attend each and every meeting herself (nor would it be desirable to do so). But as the Secretary for Economic Services at the time, she was fully briefed on progress of the discussions by her deputy and the subject officer who, from time to time, sought her instructions. In accordance with standard procedures, she cleared the draft submission to ExCo which set out the Administration's recommendations on the way ahead; and
- while it would have been quite impracticable to document all internal exchanges on a day-to-day basis, she could confirm that the process of discussions amongst ESB officials to formulate policies at the time was no different from any typical policy formulation process within the Government Secretariat leading to a recommendation to be put to ExCo.

Part V : Conclusions and recommendations

114. The Committee:

The monitoring role of the Government

- express grave concern over the substantial variance in the forecast electricity demand and the actual demand, resulting in CLP Power Hong Kong Limited (CLP)'s significant excess power generation capacity as reflected in its persistently high reserve margin since 1990;
- express serious dismay at the Administration's failure to pay sufficient regard to the structural economic changes taking place in the 1980s and early 1990s when reviewing CLP's forecast electricity demand, in particular the growing trend of the manufacturing sector relocating outside Hong Kong;
- express great dissatisfaction that despite the warning by its own consultant, the Administration did not explore at the time with CLP the possibility of including adequate flexibility in the timing of the commissioning of the power generation units, to address the risk of excess power generation capacity in CLP's 1992 Development Plan;
- express dismay at the Administration's failure to demonstrate that it had effectively played its monitoring role over CLP's 1992 Development Plan and Financial Plan before accepting CLP's substantially inaccurate forecasts of electricity demand;

Financial impact on customers

- note that according to Audit's comparison of the actual electricity demand with the forecast demand in the different scenarios (i.e. hypothetical, "best-fit line", low-growth and main-growth) during the period 1992 to 1998, the actual maximum demand was persistently lower than the forecast maximum demand and hence the excess power generation capacity in each scenario had financial impact on CLP's customers;
- express grave concern that, since under the Scheme of Control Agreements (SCAs) the costs of acquiring power generation capacity are met by the electricity tariffs paid by consumers,

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- (i) consumers have borne the risk and the financial consequences of CLP's excessive investment in power generation facilities;
 - (ii) this excessive investment is a result of erroneous judgement and policy decision; and
 - (iii) such excessive investment has proved to be wasteful and of little value for money;
- consider that the Administration has failed to convince the Committee that the Economic Services Branch, as the policy branch with the overall responsibility for monitoring the performance of the electricity supply companies, and the Economic Analysis Division (EAD), as the professional department responsible for appraising the demand forecasts, had taken adequate action to critically and rigorously vet and cross-check CLP's forecasts and to press for different cost models of demand projections, in order to assess their possible impact on consumers;
 - recognise that, due to the limited relevant data made available to the Director of Audit and the Committee and the long time lapsed, there are inherent risks of inaccuracy in any subsequent attempt to estimate the additional costs that have been borne by CLP's customers as a result of excess power generation capacity;

Documentation of the decision-making process and provision of information to the Executive Council

- find it appalling that the documentation of the decision-making process over such a significant issue was limited to what was provided to the Committee and that a full record was not kept of the discussions and considerations within the Administration leading up to its recommendations to the Executive Council (ExCo) and the eventual decision taken;
- express dissatisfaction that, in producing independent forecasts to cross-check the forecasts produced by the electricity supply companies, EAD did not document the results of the alternative approaches it adopted in forecasting;
- express serious dismay that the then Secretary for Economic Services did not provide, in the Memorandum submitted to ExCo, sufficient information on the risk of excess power generation capacity of the Modified Gas Option and on the low-growth scenario, to enable ExCo to arrive at an informed decision to approve CLP's 1992 Development Plan and Financial Plan;

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The Scheme of Control Agreements

- note that the following arrangements have been included in the Supplemental Agreements:
 - (i) the Government will in future approve the installation of new power generation units on a unit-by-unit basis;
 - (ii) the actual procurement order for a power generation unit will be placed only upon the completion of a review by the Government of the latest forecasts of the demand for electricity; and
 - (iii) the exclusion of excess power generation capacity from the average net fixed assets for calculating the permitted return;
- urge the Administration to regularly review the effectiveness of the SCAs for the Government to monitor the performance of the electricity supply companies;
- urge the Administration to consider other significant sources of electricity supply e.g. Daya Bay Nuclear Power Station in negotiating future SCAs;

Summing-up

- consider that the Administration had not fully discharged its duties to ensure that consumers received a reliable electricity supply service at a reasonable price and to monitor the performance of the two electricity supply companies, as it had failed:
 - (i) to take adequate action to critically and rigorously vet and cross-check CLP's forecasts;
 - (ii) to adequately assess the excess power generation capacity in different growth scenarios and the financial impact on CLP's customers;
 - (iii) to inform ExCo of the risk of excess power generation capacity of the Modified Gas Option and the low-growth scenario;
 - (iv) to keep a full record of its internal discussions and considerations leading up to ExCo's approval of CLP's 1992 Development Plan and Financial Plan; and

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- (v) to assess the effectiveness of the respective SCAs, at the time of their renewal in 1993 and 1994, for monitoring the performance of the electricity supply companies;

and to that extent, it should be held responsible for the consequences arising from such deficiencies;

- note the statement made by the Secretary for Economic Services at the Legislative Council debate on 19 March 1997 that CLP, as a responsible public utility company, should definitely shoulder the responsibility to society for the commercial decision it made and take appropriate measures to protect the interests of its customers;
- are disappointed that at the public hearing on 4 October 1999, the Secretary for Economic Services had not further explained what he had done since 19 March 1997 in advancing this position;
- consider that it is the duty of the Administration to immediately explore with CLP the various means through which it can redress the additional financial burden CLP's customers have borne because of its excessive investment in power generation facilities;
- note that the Administration has agreed:
 - (i) to document the forecast results of alternative approaches and the justifications for choosing the final forecasts in the future;
 - (ii) to ensure that internal assessments and discussions relating to the vetting of development plans and financial plans from electricity supply companies are fully documented;
 - (iii) to discuss with CLP the possibility of deferring the commissioning of units 7 and 8 of the Black Point Project further by two more years;
 - (iv) to assess the possibility of building in more flexibility in the approval and the timing of the commissioning of power generation units in the development plans of electricity supply companies;
 - (v) to consider whether the electricity supply from the Daya Bay Nuclear Power Station and other sources should be included in the SCA when negotiating a new agreement with CLP; and

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- (vi) to ensure that in seeking ExCo's approval for the future development plan and financial plan of an electricity supply company, it will include sufficient relevant information in its submission to ExCo in order that ExCo can make informed decisions; and
- wish to be kept informed of:
- (i) the progress of the discussion between the Administration and CLP regarding the further deferral of the commissioning of units 7 and 8 and other means through which CLP can redress the additional financial burden borne by its customers; and
 - (ii) the progress of the consultancy study on the interlink between the two electricity supply companies and on the promotion of competition in the market.

Chapter 2

A follow-up review of the year 2000 problem

The Committee noted that the Director of Audit had conducted a follow-up review on the progress of the Government's efforts in tackling the year 2000 (Y2K) problem. In the review, Audit had examined the latest position of Y2K compliance across the whole-of-government and non-government organisations (NGOs) which provide essential services to the public.

2. The Committee understood that Audit had conducted a high level review at the Information Technology and Broadcasting Bureau (ITBB), the Information Technology Services Department (ITSD), the Electrical and Mechanical Services Department (EMSD) and Office of the Telecommunications Authority (OFTA) to assess how they addressed the whole-of-government risks associated with the Y2K problem. Audit had also held interviews and carried out fieldwork at the Immigration Department, the Hong Kong Police Force (Police), the Housing Authority/Housing Department, the Civil Aviation Department (CAD) and the Hospital Authority to examine their Y2K programmes. In addition, interviews and fieldwork had been conducted at the Health and Welfare Bureau, the Transport Bureau, the Economic Services Bureau, the Financial Services Bureau and OFTA to examine their monitoring of the sectors under their respective purview. The Committee further noted that findings of the audit fieldwork carried out between April and July 1999 had been reported to the organisations concerned to enable them to take early action.

3. The Committee did not hold any public hearing on the subject. Instead, the Committee asked for written response in the following areas:

- the overall approach and mechanism adopted by the ITBB in monitoring the progress of Y2K compliance work in government organisations and NGOs;
- the international standards and international best practices on independent quality assurance reviews to which the ITBB had referred in monitoring the organisations' Y2K compliance work;
- actions taken by the ITBB in co-ordinating the provision of Y2K-related training to different government organisations and NGOs; and
- the up-to-date position of the various outstanding issues covered in the Audit Report.

Chapter 2

A follow-up review of the year 2000 problem

4. The **Secretary for Information Technology and Broadcasting** has provided the Committee with his comments on the above matters which are set out in the ensuing paragraphs.

The approach and mechanism adopted by the ITBB

5. The Committee noted from paragraph 2.4 of the Audit Report that the ITBB was responsible for co-ordinating the Government's approach to the Y2K problem. Hence, the Committee asked about the overall approach and mechanism adopted by the ITBB in monitoring the progress towards Y2K compliance at the whole-of-government level and at NGOs providing essential services to the public.

6. In his letter of 26 October 1999 in *Appendix 28*, the **Secretary for Information Technology and Broadcasting** informed the Committee that the Government had set up a high-level Steering Committee on Year 2000 Compliance (the Steering Committee) to co-ordinate the Y2K compliance work in Hong Kong. The Steering Committee, chaired by the Secretary for Information Technology and Broadcasting, comprised representatives from various bureaux and departments closely involved in Y2K compliance work. It met regularly to review the progress of compliance work within the Government and among essential service providers and to decide on Y2K-related policy issues.

Within the Government

7. The **Secretary for Information Technology and Broadcasting** said that for government bureaux and departments, policy secretaries and heads of departments were required to submit regular reports to the Steering Committee on the progress of rectification work and contingency planning within their respective bureaux and departments. To ensure that the Y2K issue was accorded the highest priority, policy secretaries and heads of departments were required to personally sign off the progress reports for submission to the Steering Committee.

Non-government organisations

8. According to the **Secretary for Information Technology and Broadcasting**, the Steering Committee monitored the progress of Y2K compliance work of NGOs providing essential services through the respective policy bureaux, government departments and regulatory bodies. The policy secretaries concerned were required to personally sign off regular progress reports in respect of the Y2K compliance work carried out by the NGOs under their purview for submission to the Steering Committee. The bureaux and departments had also set up working groups and task forces as appropriate to help in their monitoring work. On-site visits to individual NGOs were conducted where necessary.

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International standards and international best practices on independent quality assurance reviews

9. The Committee noted that one of Audit's concerns was that the Government's approach to obtaining independent quality assurance for its Y2K programmes was not entirely structured. There was no clear requirement for independent quality assurance reviews to be conducted within government bureaux and departments or essential service providers. Under the circumstances, the Committee asked whether the ITBB had made reference to any international standards or international best practices on independent quality assurance reviews in monitoring the Y2K compliance work of government organisations and NGOs.

10. The **Secretary for Information Technology and Broadcasting** informed the Committee that, in monitoring the Y2K compliance work within the Government and among essential service providers, the ITBB, the three professional departments (i.e. the ITSD, the EMSD and OFTA) as well as the bureaux and departments concerned had made reference to international standards and recommended practices on independent quality assurance reviews where appropriate. The Secretary gave an account of the Government's approaches to quality assurance for Y2K rectification work and Y2K contingency planning as follows.

Quality assurance for Y2K rectification work

Within the Government

11. The rectification of the Government's mission-critical computer systems was co-ordinated by the ITSD. The ITSD's approach to quality assurance complied with ISO9001-1994, ISO/IEC 12207-1, and the Institute of Electrical and Electronics Engineers' (IEEE) Standards for Software Reviews and Audits (IEEE Std 1028-1068). Specifically, all Y2K-related system maintenance and development projects implemented by the ITSD were required to be reviewed independently. The quality assurance work for the Y2K rectification projects was carried out by a team not involved in the rectification project.

12. In addition, the ITSD had established a Y2K task force in March 1999 to visit the departments providing important services to the public and to review their approach and methodology for rectifying the mission-critical computer systems. The review covered assessment and rectification planning, readiness and dependency with business partners, overall testing of rectification work, verification of the rectification work for individual

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mission-critical systems, and the management's involvement in the Y2K rectification programme.

13. The rectification of the Government's embedded systems and line communication systems was co-ordinated by the EMSD and OFTA respectively. Regarding quality assurance for the rectification of these two types of systems, both the EMSD and OFTA had followed the Institution of Electrical Engineers (IEE)'s Technical Guidelines 9:1997 - "Embedded Systems and the Year 2000 Problem - Guidance Notes". The guidelines stated that for each embedded system, it was necessary either to obtain the supplier's confirmation of compliance or to perform in-house checking, or to do both. If found non-compliant, the system should be rectified. The supplier's statement of compliance should be obtained or re-checking should be performed to confirm compliance. The Guidance Notes also recommended procedures on documentation and control on changes made after achieving compliance.

14. As to the Government's embedded systems, the EMSD had in addition engaged two external consultants to perform independent assessment of the Y2K compliance work. One of the consultants had performed a review of the overall approach of the EMSD's Y2K compliance programme while the other consultant had performed independent testing to verify the Y2K compliance findings of the EMSD. The EMSD had also set up an internal audit team to perform further auditing of its Y2K compliance work.

15. The Government's line communication systems were in the first instance tested by the system maintenance contractors in accordance with the Y2K testing procedures drawn up by OFTA having regard to the IEE Technical Guidelines. OFTA then conducted spot checks on the testing procedures to ensure that all the requirements stipulated by OFTA had been met by the system maintenance contractors. Moreover, OFTA had tested individual models of the line communication systems being used by the Government to verify their compliance status. As a further safeguard, OFTA had requested all government bureaux and departments having mission-critical line communication systems, which had been confirmed compliant by the suppliers and did not require rectification, to forward the test reports to OFTA for checking. As at mid-October 1999, OFTA had completed checking the test reports of all mission-critical line communication systems within the Government. No exception had been identified.

16. Apart from the quality assurance practices adopted by the ITSD, the EMSD and OFTA, some government bureaux and departments had engaged external consultants or internal audit teams to review their Y2K programmes and perform verification tests for their systems. The scope of such audits or assessment generally covered the following two aspects:

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- to assess the approach and methodology of the Y2K compliance work conducted by the concerned government bureau/department; and
- to perform independent validation and verification of the compliance status of selected systems.

Essential service sectors

17. According to the **Secretary for Information Technology and Broadcasting**, to ensure the quality in Y2K compliance work, the essential service providers had, where appropriate, conducted internal audits or engaged external consultants to conduct independent review of their Y2K compliance work. For those industries with known guidelines or recommended practices for conducting Y2K compliance work, the policy bureaux/departments and regulatory bodies concerned had made reference to them in monitoring the Y2K compliance work in the sectors under their purview. The following were examples:

- in the banking sector, the Hong Kong Monetary Authority (HKMA) had requested all banking institutions to implement Y2K compliance programmes by making reference to the guidance notes issued by the Basle Committee on Banking Supervision;
- in the aviation sector, the Y2K rectification approach and methodology for the CAD's air traffic control services had been reviewed by the International Air Transport Association and the result was found to be satisfactory; and
- in the maritime sector, the Marine Department had made reference to the Y2K Code of Good Practice and key elements of Y2K contingency plans for ships, ports and terminals issued by the International Maritime Organisation (IMO).

18. The ITBB, in collaboration with the EMSD, the ITSD and OFTA, had set up a Y2K Task Force in March 1999 to conduct site visits to the essential service providers to discuss their compliance position, the progress of their rectification work and whether adequate contingency plans were in place, with a view to assisting the policy bureaux and departments concerned in monitoring the compliance work in essential service sectors.

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Quality assurance for Y2K contingency planning

19. The **Secretary for Information Technology and Broadcasting** further informed the Committee that the Steering Committee had issued two sets of guidelines on Y2K contingency planning in May 1999 to assist government bureaux and departments in formulating Y2K contingency plans and assessing the contingency plans formulated by NGOs. The guidelines had been drawn up with reference to the guidelines issued by the United States (US) General Accounting Office and other guidelines by the Australian and US state governments.

20. In addition, the ITBB had, where appropriate, made reference to recommended practices or guidelines issued by professional organisations or institutions when formulating contingency plans for the Government's mission-critical systems and reviewing the contingency plans prepared by the essential service providers. The following were examples:

- for embedded systems, reference had been made to the IEE Technical Guidelines on Embedded Systems and the Year 2000 Problem;
- for embedded systems for medical use, reference had been made to the guidelines "Contingency Planning for Safe Year 2000" issued by the Health and Safety Executive of the United Kingdom; and
- for line communication systems, reference had been made to the recommended practices for disaster recovery issued by the International Telecommunication Union.

Provision of Y2K-related training

21. The Audit Report revealed that the Hong Kong Police Force had not involved its Internal Audit Division in reviewing its Y2K programmes due to the Division's lack of the necessary expertise. The Committee therefore enquired about the actions taken by the ITBB in co-ordinating the provision of Y2K-related training to government bureaux and departments, as well as NGOs, and the details of such training.

22. The **Secretary for Information Technology and Broadcasting** said that since 1997, the ITSD, the EMSD and OFTA had issued guidance notes and organised seminars and workshops to introduce the Y2K problem and the approaches to the rectification of computer

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systems, embedded systems and line communication systems. Reference had been made to the best practices or standards in the industry when drawing up the guidance notes.

23. In respect of contingency planning, apart from the guidelines issued by the Steering Committee, the ITBB had, in co-operation with other government bureaux/departments and essential service providers, organised a series of seminars and workshops for all government bureaux and departments to introduce various Y2K-related issues including legal issues, quality assurance, contingency planning and the Y2K preparedness of essential service sectors in Hong Kong.

24. The government bureaux and departments concerned had issued guidelines and organised workshops to introduce Y2K-related issues to NGOs in the sectors under their purview where necessary. For example:

- the HKMA and the Insurance Authority had issued guidance notes to assist the banking institutions and the insurance companies respectively in implementing the Y2K compliance programme and in formulating contingency plans;
- the Social Welfare Department had organised workshops for NGOs in the social service sector to introduce the approach to Y2K compliance work and Y2K contingency planning; and
- the Marine Department had organised seminars for the local shipping industry on IMO's recommended practices on Y2K compliance work.

Updated position of outstanding issues

25. Noting that there were a number of recommendations in the Audit Report which had yet to be implemented, the Committee asked for an up-to-date report on the position of the various issues raised. The **Secretary for Information Technology and Broadcasting**, in his letter of 26 October 1999 in *Appendix 29*, provided the Committee with the updated position of the various outstanding issues raised in the Audit Report.

Monitoring by Legislative Council Panels

26. The Committee noted that, in view of the importance of the Y2K issue, the House Committee of the Legislative Council agreed at its meeting on 12 March 1999 that the various Panels of the Council should closely monitor the Y2K compliance position of government departments and NGOs falling within their purview. The first round of meetings conducted

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by the respective Panels for this purpose was completed in May 1999. In examining the issue, the Panels focused on the following areas:

- the extent of the Y2K problem and the associated risks and impacts on the community;
- the resources for tackling the Y2K problem within the Government and NGOs;
- the progress of the Y2K rectification exercise within the Government and NGOs; and
- contingency planning.

27. The Committee further noted that the House Committee later decided at its meeting on 25 June 1999 that the Panels should conduct another round of meetings before the end of October 1999 to follow up the issues which had been identified for further monitoring, namely:

- the latest Y2K compliance position within individual policy areas, including the Y2K readiness of their business partners and the results of sector-wide or territory-wide testing amongst different internal and external systems, where applicable;
- the risk assessment and formulation of contingency plans for possible Y2K problems within the Government and NGOs providing essential services to the public;
- the Y2K compliance positions of major overseas/business partners of essential service providers where such compliance was critical to the service continuity of the essential service providers concerned, the possible impact of Y2K-induced failures on the essential service providers and the related contingency planning; and
- the publicity programme on Y2K-related issues and the actions to be taken by the general public in order to be prepared for the transition.

28. Between 13 March 1999 and 16 November 1999, there were 38 Panel meetings during which the Y2K issue was discussed. A site visit to the Police Headquarters on its Y2K exercise was also conducted. A list of the relevant Panel meetings and site visit is in *Appendix 30*.

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29. **Conclusions and recommendations** The Committee:

Overall year 2000 (Y2K) rectification progress

- note that the overall Y2K compliance position, as reported by the Information Technology and Broadcasting Bureau (ITBB), is satisfactory for government and non-government organisations providing essential services;
- urge the Secretary for Information Technology and Broadcasting to:
 - (i) closely monitor the compliance progress of the outstanding Y2K non-compliant systems in the Government; and
 - (ii) closely monitor the progress of the non-government organisations which have not achieved Y2K compliance and take effective action (including intervention) on those organisations with unsatisfactory progress;

The Administration's actions to address common Audit observations

- recommend that the Secretary for Information Technology and Broadcasting should take follow-up action to ensure that:
 - (i) bureaux and departments have required their internal audit units to conduct rigorous audits on their Y2K programmes;
 - (ii) those bureaux and departments without internal audit units have made use of alternative means to audit their Y2K programmes;
 - (iii) bureaux and departments have instituted effective control procedures to ensure that Y2K compliant computer systems would not become non-compliant as a result of routine system maintenance activities or system enhancement; and
 - (iv) bureaux and departments have adequately assessed the Y2K risks relating to their business partners and have implemented corporate strategies for dealing with Y2K non-compliant business partners;

Independent quality assurance

A follow-up review of the year 2000 problem

- consider that independent quality assurance reviews are important because they provide the Government and the public with added assurance on Hong Kong's Y2K readiness;
- acknowledge the Secretary for Information Technology and Broadcasting's reply that the ITBB, the Information Technology Services Department, the Electrical and Mechanical Services Department and Office of the Telecommunications Authority and other bureaux/departments concerned have made reference to international standards and recommended practices on independent quality assurance reviews such as ISO standards and guidelines issued by professional organisations or institutions, where appropriate;
- urge that the Secretary for Information Technology and Broadcasting should:
 - (i) urgently take stock of the existing independent quality assurance programmes in government organisations and non-government organisations providing essential services;
 - (ii) for those key organisations found to have inadequate independent quality assurance programmes, take immediate action to strengthen their programmes as far as possible;
 - (iii) if time or resources do not permit a more extensive programme, focus the independent quality assurance efforts on contingency planning; and
 - (iv) obtain supporting evidence (such as test plans and test results) of the reported Y2K compliance status of key organisations and set up a mechanism for overseeing the independent verification of their reported progress;

Y2K contingency planning

- note the Government's progress on Y2K contingency planning at all levels (i.e. the organisation, sector and territory levels);
- recommend the ITBB to focus its effort on contingency planning in the remaining days before the rollover to the new millennium. In particular, the Secretary for Information Technology and Broadcasting should:
 - (i) critically assess, in conjunction with policy bureaux, the adequacy of the contingency plans submitted by government organisations and non-

A follow-up review of the year 2000 problem

government organisations providing essential services to ensure that the contingency plans are adequate; and

- (ii) for all levels of Y2K contingency plans, make continued efforts to test and improve the plans, so as to ensure that comprehensive and workable plans are firmly in place before year 2000 to meet the challenges ahead;
- note that the various Panels of the Legislative Council have been monitoring the Government's work on the Y2K problem within their respective policy areas, and urge the ITBB to work closely with the Panels and pay heed to their comments and suggestions, specially with regard to contingency planning;

Audit observations on individual organisations and sectors

- note the updated position of the various outstanding issues raised in the Audit Report as set out in *Appendix 29*; and
- urge the heads of the bureaux, departments and organisations concerned to remain vigilant and to make continued efforts to ensure that all outstanding issues are satisfactorily dealt with before year 2000.

**SIGNATURES OF THE CHAIRMAN, DEPUTY CHAIRMAN AND
MEMBERS OF THE COMMITTEE**

Eric LI Ka-cheung
(*Chairman*)

Fred LI Wah-ming
(*Deputy Chairman*)

David CHU Yu-lin

NG Leung-sing

Sophie LEUNG LAU Yau-fun

LAU Kong-wah

Emily LAU Wai-hing

1 December 1999

**CHAPTERS IN THE DIRECTOR OF AUDIT'S REPORT NOS. 32 AND 33A
DEALT WITH IN THE PUBLIC ACCOUNTS COMMITTEE'S REPORT**

Director of Audit's Report No. 32 Chapter _____	Subject	P.A.C. Report No. 33A Chapter _____
5	The Government's monitoring of electricity supply companies	1
Director of Audit's Report No. 33A _____	A follow-up review of the year 2000 problem	2

**RULES OF PROCEDURE OF
THE LEGISLATIVE COUNCIL OF
THE HONG KONG SPECIAL ADMINISTRATIVE REGION**

72. Public Accounts Committee

(1) There shall be a standing committee, to be called the Public Accounts Committee, to consider reports of the Director of Audit –

- (a) on the accounts of the Government;
- (b) on such other accounts required to be laid before the Council as the committee may think fit; and
- (c) on any matter incidental to the performance of his duties or the exercise of his powers as the committee may think fit.

(2) The committee shall also consider any report of the Director of Audit laid on the Table of the Council which deals with examinations (value for money audit) carried out by the Director relating to the economy, efficiency and effectiveness of any Government department or public body or any organization to which his functions as Director of Audit extend by virtue of any Ordinance or which receives public moneys by way of subvention.

(3) The committee shall consist of a chairman, deputy chairman and 5 members who shall be Members appointed by the President in accordance with an election procedure determined by the House Committee. In the event of the temporary absence of the chairman and deputy chairman, the committee may elect a chairman to act during such absence. The chairman and 2 other members shall constitute a quorum.

(4) A report mentioned in subrules (1) and (2) shall be deemed to have been referred by the Council to the committee when it is laid on the Table of the Council.

(5) Unless the chairman otherwise orders, members of the press and of the public shall be admitted as spectators at meetings of the committee attended by any person invited by the committee under subrule (8).

(6) The committee shall meet at the time and the place determined by the chairman. Written notice of every meeting shall be given to the members and to any person invited to attend a meeting at least 5 clear days before the day of the meeting but shorter notice may be given in any case where the chairman so directs.

(7) All matters before the committee shall be decided by a majority of the members voting. Neither the chairman nor any other member presiding shall vote, unless the votes of the other members are equally divided, in which case he shall have a casting vote.

(8) The chairman or the committee may invite any public officer, or, in the case of a report on the accounts of or relating to a non-government body or organization, any member or employee of that body or organization, to give information or any explanation or to produce any records or documents which the committee may require in the performance of its duties; and the committee may also invite any other person to assist the committee in relation to any such information, explanation, records or documents.

(9) The committee shall make their report upon the report of the Director of Audit on the accounts of the Government within 3 months (or such longer period as may be determined under section 12 of the Audit Ordinance (Cap. 122)) of the date on which the Director's report is laid on the Table of the Council.

(10) The committee shall make their report upon the report of the Director of Audit mentioned in subrule (2) within 3 months (or such longer period as may be determined by the Council) of the date on which the Director's report is laid on the Table of the Council.

(11) Subject to these Rules of Procedure, the practice and procedure of the committee shall be determined by the committee.

**Paper presented to the Provisional Legislative Council
by the Chairman of the Public Accounts Committee
at the meeting on 11 February 1998 on
Scope of Government Audit in the
Hong Kong Special Administrative Region -
'Value for Money Audits'**

SCOPE OF WORK

1. The Director of Audit may carry out examinations into the economy, efficiency and effectiveness with which any bureau, department, agency, other public body, public office, or audited organisation has discharged its functions.

2. The term "audited organisation" shall include -
 - (i) any person, body corporate or other body whose accounts the Director of Audit is empowered under any Ordinance to audit;
 - (ii) any organisation which receives more than half its income from public moneys (this should not preclude the Director from carrying out similar examinations in any organisation which receives less than half its income from public moneys by virtue of an agreement made as a condition of subvention); and
 - (iii) any organisation the accounts and records of which the Director is authorised in writing by the Chief Executive to audit in the public interest under section 15 of the Audit Ordinance (Cap. 122).

3. This definition of scope of work shall not be construed as entitling the Director of Audit to question the merits of the policy objectives of any bureau, department, agency, other public body, public office, or audited organisation in respect of which an examination is being carried out or, subject to the following Guidelines, the methods by which such policy objectives have been sought, but he may question the economy, efficiency and effectiveness of the means used to achieve them.

GUIDELINES

4. The Director of Audit should have great freedom in presenting his reports to the Legislative Council. He may draw attention to any circumstance which comes to his knowledge in the course of audit, and point out its financial implications. Subject to these Guidelines, he will not comment on policy decisions of the Executive Council and the Legislative Council, save from the point of view of their effect on the public purse.

5. In the event that the Director of Audit, during the course of carrying out an examination into the implementation of policy objectives, reasonably believes that at the time policy objectives were set and decisions made there may have been a lack of sufficient, relevant and reliable financial and other data available upon which to set such policy objectives or to make such decisions, and that critical underlying assumptions may not have been made explicit, he may carry out an investigation as to whether that belief is well founded. If it appears to be so, he should bring the matter to the attention of the Legislative Council with a view to further inquiry by the Public Accounts Committee. As such an investigation may involve consideration of the methods by which policy objectives have been sought, the Director should, in his report to the Legislative Council on the matter in question, not make any judgement on the issue, but rather present facts upon which the Public Accounts Committee may make inquiry.

6. The Director of Audit may also -

- (i) consider as to whether policy objectives have been determined, and policy decisions taken, with appropriate authority;
- (ii) consider whether there are satisfactory arrangements for considering alternative options in the implementation of policy, including the identification, selection and evaluation of such options;
- (iii) consider as to whether established policy aims and objectives have been clearly set out; whether subsequent decisions on the implementation of policy are consistent with the approved aims and objectives, and have been taken with proper authority at the appropriate level; and whether the resultant instructions to staff accord with the approved policy aims and decisions and are clearly understood by those concerned;

- (iv) consider as to whether there is conflict or potential conflict between different policy aims or objectives, or between the means chosen to implement them;
- (v) consider how far, and how effectively, policy aims and objectives have been translated into operational targets and measures of performance and whether the costs of alternative levels of service and other relevant factors have been considered, and are reviewed as costs change; and
- (vi) be entitled to exercise the powers given to him under section 9 of the Audit Ordinance (Cap. 122).

PROCEDURES

7. The Director of Audit shall report his findings on value for money audits in the Legislative Council twice each year. The first report shall be submitted to the President of the Legislative Council within seven months of the end of the financial year, or such longer period as the Chief Executive may determine. Within one month, or such longer period as the President may determine, copies shall be laid before the Legislative Council. The second report shall be submitted to the President of the Legislative Council by the 7th of April each year, or such date as the Chief Executive may determine. By the 30th April, or such date as the President may determine, copies shall be laid before the Legislative Council.

8. The Director's report shall be referred to the Public Accounts Committee for consideration when it is laid on the table of the Legislative Council. The Public Accounts Committee shall follow the rules governing the procedures of the Legislative Council in considering the Director's reports.

9. A Government minute commenting on the action Government proposes to take in respect of the Public Accounts Committee's report shall be laid on the table of the Legislative Council within three months of the laying of the report of the Committee to which it relates.

10. In this paper, reference to the Legislative Council shall, during the existence of the Provisional Legislative Council, be construed as the Provisional Legislative Council.

**Principal witnesses who appeared before the Committee
(in order of appearance)**

Ms Maria KWAN Sik-ning, JP	Acting Secretary for Economic Services
Mr Eric Johnson	Principal Assistant Secretary (Economic Services) B
Mr LI Kwok-tso, JP	Principal Assistant Secretary (Economic Services) Financial Monitoring
Mr LAM Kam-kuen	Acting Assistant Director (Energy Efficiency), Electrical and Mechanical Services Department
Mrs Rebecca LAI KO Wing-yee, JP	Acting Secretary for Financial Services
Mr TANG Kwong-yiu, JP	Government Economist
Mr Mike Price	Managing Director, CLP Power Hong Kong Limited
Mrs Annette Hobhouse	Commercial Manager, CLP Power Hong Kong Limited
Mrs Sandra MAK	Group Public Affairs Manager, CLP Power Hong Kong Limited
Dr Albert POON	Chief Planning Manager, CLP Power Hong Kong Limited
Mr Wayne Harms	Director, Castle Peak Power Company Limited
Mr TSO Kai-sum	Managing Director, Hongkong Electric Company Limited
Mr Francis LEE Lan-yee	Director and General Manager (Engineering), Hongkong Electric Company Limited
Mr Gary CHANG Chung-keung	General Manager (Development and Planning), Hongkong Electric Company Limited

Mr SUNG Shu-kwai	Chief Hardware and System Planning Engineer, Hongkong Electric Company Limited
Mr Stephen IP Shu-kwan, JP	Secretary for Economic Services
Mr LEE Lo-tung	Assistant Director (Energy Efficiency), Electrical and Mechanical Services Department
Mr Stephen LAU Chi-sing	Economic Planning Manager, CLP Power Hong Kong Limited
Mr Chris CHAN	Public Affairs Manager, CLP Power Hong Kong Limited
Mr Norman Kreutter	Director, Castle Peak Power Company Limited
The Hon Mrs Anson CHAN, GBM, JP	Chief Secretary for Administration <i>(Former Secretary for Economic Services during the period 1987 to 1993)</i>
Miss Amy CHAN	Assistant Secretary (Economic Services)
Mr S F Goldmann	Chairman, Castle Peak Power Company Limited

