

**立法會**  
**Legislative Council**

LC Paper No. CB(1)1310/05-06  
(These minutes have been seen  
by the Administration)

Ref: CB1/PL/ES/1

**Panel on Economic Services**

**Minutes of meeting held on  
Monday, 27 March 2006, at 10:45 am  
in the Chamber of the Legislative Council Building**

- Members present** : Hon James TIEN Pei-chun, GBS, JP (Chairman)  
Hon Jeffrey LAM Kin-fung, SBS, JP (Deputy Chairman)  
Ir Dr Hon Raymond HO Chung-tai, S.B.St.J., JP  
Dr Hon David LI Kwok-po, GBS, JP  
Hon Fred LI Wah-ming, JP  
Hon CHAN Kam-lam, SBS, JP  
Hon SIN Chung-kai, JP  
Hon Howard YOUNG, SBS, JP  
Hon LAU Chin-shek, JP  
Hon Miriam LAU Kin-yee, GBS, JP  
Hon Abraham SHEK Lai-him, JP  
Hon Vincent FANG Kang, JP  
Hon Andrew LEUNG Kwan-yuen, SBS, JP  
Hon WONG Ting-kwong, BBS  
Hon Ronny TONG Ka-wah, SC  
Hon CHIM Pui-chung  
Hon Albert Jinghan CHENG  
Hon TAM Heung-man
- Members attending** : Hon Mrs Selina CHOW LIANG Shuk-ye, GBS, JP  
Hon Tommy CHEUNG Yu-yan, JP
- Members absent** : Dr Hon LUI Ming-wah, SBS, JP  
Hon KWONG Chi-kin

**Public Officers  
attending**

**: Agenda item IV**

Ms Sandra LEE  
Permanent Secretary for Economic Development and  
Labour (Economic Development)

Mr Howard LEE  
Deputy Secretary for Economic Development and Labour  
(Economic Development)<sup>2</sup>

Ms Brenda CHENG  
Principal Assistant Secretary for Economic Development  
and Labour (Economic Development)

**Agenda item V**

Ms Sandra LEE  
Permanent Secretary for Economic Development and  
Labour (Economic Development)

Mr Wilson FUNG  
Deputy Secretary for Economic Development and Labour  
(Economic Development)<sup>1</sup>

Mr Darryl CHAN  
Principal Assistant Secretary for Economic Development  
and Labour (Economic Development)

Mr Y K LEUNG  
Deputy Director-General of Civil Aviation

**Attendance by  
invitation**

**: Agenda item IV**

Hong Kong and China Gas Company Limited

Mr Alfred CHAN  
Managing Director

Mr James KWAN  
Executive Director and Chief Operating Officer

Mr Philip SIU  
Senior Commercial Manager

**Clerk in attendance** : Mr Andy LAU  
Chief Council Secretary (1)2

**Staff in attendance** : Ms Debbie YAU  
Senior Council Secretary (1)1

Miss Winnie CHENG  
Legislative Assistant (1)5

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- I Confirmation of minutes and matters arising**  
(LC Paper No. CB(1)1117/05-06 - Minutes of meeting held on  
27 February 2006)

The minutes of the meeting held on 27 February 2006 were confirmed.

- II Information papers issued since last meeting**  
(LC Paper No. CB(1)1013/05-06(01) - Tables and graphs showing the  
import and retail prices of major  
oil products from February 2004  
to January 2006 furnished by the  
Census and Statistics Department
- LC Papers No. CB(1)1098/05-06(01) - Referral from LegCo Members'  
and (02) Meeting with Southern District  
Council on 12 January 2006 on  
Aberdeen Harbour Planning Brief  
and Tourism Project in Aberdeen  
together with the Administration's  
response
- LC Paper No. CB(1)1099/05-06(01) - Submission from Concern Group  
on Hong Kong Tourism Industry  
regarding the use of Travel  
Industry Compensation Fund
- LC Paper No. CB(1)1110/05-06(01) - Referral from Tuen Mun District  
Council on Emission of black  
smoke from vessels in Tuen Mun  
typhoon shelter)

2. Members noted the information papers issued since last meeting.

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**III Items for discussion at the next meeting scheduled for 24 April 2006**

- (LC Paper No. CB(1)1116/05-06(01) - List of outstanding items for discussion  
LC Paper No. CB(1)1116/05-06(02) - List of follow-up actions)

3. Members agreed that the following items proposed by the Administration would be discussed at the next meeting scheduled for 24 April 2006 –

- (a) An energy item;
- (b) Redevelopment Plans for the Ocean Park - Complementary Public Works on Sewerage Upgrading; and
- (c) Progress of the Ngong Ping 360 project.

4. The Chairman informed members that as he would be out of town on 24 April 2006, the Deputy Chairman would chair the next Panel meeting.

**IV Information and Consultation Agreement with The Hong Kong and China Gas Company Limited**

- (LC Paper No. CB(1)1116/05-06(03) - Information paper provided by the Administration)

5. At the invitation of the Chairman, the Deputy Secretary for Economic Development and Labour (Economic Development) 2 (DS/ED 2) briefed members on the Administration's plan to extend the Information and Consultation Agreement (ICA) between the Government and The Hong Kong and China Gas Company Limited (HKCG) and the improvements to be made upon the extension. In gist, he said that the Government and HKCG first entered into an ICA relating to the Company's core gas business and gas-related activities in Hong Kong in April 1997. The ICA was a voluntary agreement with terms and conditions mutually agreed between both parties. The ICA had been extended twice in March 2000 and April 2003 respectively. Its objective was to increase transparency in the HKCG's tariff setting mechanism, and provide justification thereof, in the event of tariff adjustments. Pursuant to the ICA, HKCG had consulted the Government and briefed the Energy Advisory Committee as well as the Panel in late 1997 on the adjustment to their tariff and fixed monthly service charge for the year 1998. Since then, HKCG had not made any adjustment to both. HKCG had indicated that with the introduction of natural gas as a feedstock later this year, the net gas charge would be lowered. DS/ED 2 said that as the current ICA would expire on 2 April 2006, the Administration and HKCG had agreed to extend the ICA for a period of 3 years commencing 3 April 2006.

6. With the aid of PowerPoint presentation, Mr Alfred CHAN, Managing Director of HKCG and Mr James KWAN, Executive Director and Chief Operating Officer of HKCG briefed members on their plan to introduce natural gas as an alternate feedstock to naphtha for production of town gas in 2006. They said that in

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2002, HKCG had entered into a 25-year term contract for natural gas supply. Emission would be substantially reduced following the planned use of natural gas as part of the feedstock for the production of town gas by end of this year. Upon full implementation, the emissions of carbon dioxide, nitrogen oxides and sulphur dioxide were expected to be reduced by about 26%, 42% and 40% respectively.

7. Mr James KWAN further highlighted that under the ICA, HKCG had enhanced its transparency and scope of consultation whilst ensuring a safe and reliable supply of town gas. To enhance network safety, HKCG had accelerated the replacement of all cast iron pipes and increased the number of active site inspections to reduce third-party damage to its facilities. As regards home safety, HKCG had carried out safety inspection and provided gas appliance maintenance services to customers at regular intervals. On environmental front, HKCG had, inter alia, installed de-nitrogen oxides system to units 1 & 2 of Tai Po phase I plant in 2005 and recycled over 800 tonnes of discarded gas appliances in each of 2004 and 2005. In addition, HKCG had been actively involved in charity work to provide free services and programmes for the needy, and launched tariff concession schemes for the elderly and people with disabilities.

## Discussion

8. Dr David LI declared interest as a director of HKCG.

### *Use of natural gas and impact on net gas charge*

9. Ir Dr Raymond HO commended the initiatives and performance of HKCG in the past years, in particular the introduction of natural gas as a feedstock to generate town gas as this would help establish a reliable long-term supply of energy for Hong Kong and reduce gas production cost so as to bring fuel savings to customers. He sought clarification on the amount of fuel savings brought to customers and its relationship with the crude oil price. Given the economic and environmental benefits for using natural gas as feedstock, he enquired whether HKCG had a plan to use natural gas solely as feedstock to generate town gas.

10. Mr Alfred CHAN, Managing Director of HKCG explained that the cost of natural gas was significantly cheaper than naphtha as crude oil price continued to stay at a high level. Introduction of natural gas to replace portions of naphtha as feedstock to generate town gas would enable the company to pass fuel savings to its customers. HKCG planned to use natural gas as a feedstock alternate to naphtha on a 60:40 proportion in respect of total gas production. There would be around 5% savings in net gas charge if crude oil price was at about US\$ 35 per barrel. The savings would likely approach 10% if the crude oil price was similar to the current level, i.e. US\$ 60 per barrel. Mr CHAN further remarked that since HKCG had entered into a 25-year term contract for natural gas in 2002 when the crude oil price was at about US\$ 15 - US\$ 25 per barrel, prices for natural gas should be more stable and, in the long run, cheaper than naphtha, especially when crude oil price stayed high. Mr CHAN also highlighted the clean production process of HKCG and that the use of natural gas as an

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alternate feedstock could help reduce emissions by as much as 40%.

11. Mr Jeffrey LAM appreciated that HKCG had made a timely decision by entering into a 25-year agreement in 2002 with the natural gas supplier when the crude oil price was at low level. He enquired whether HKCG would continue to source for new natural gas supply and conclude new agreements with suppliers at good prices. Noting the benefits for using natural gas as feedstock, Mr LAM also called for the early implementation of the proposal. Regarding the proposal to use natural gas as the sole feedstock to generate town gas, he was concerned about the impacts on existing production plants as well as the reliability of natural gas supply.

12. Mr Alfred CHAN of HKCG said that HKCG had entered a 25-year term contract for natural gas supply in line with established international practice in 2002 when the crude oil price was relatively low. He said that the price of natural gas had gone up since then and it might not be that cost-effective for HKCG to enter into new agreements for natural gas supply at this stage. Regarding the commencement date of using natural gas as feedstock to generate town gas, Mr CHAN said that whilst the relevant infrastructural works in the gas production plants in Hong Kong were mostly completed, the liquefied natural gas receiving terminal in Shenzhen had yet to be completed. He assured members that if practicable, HKCG would strive to use natural gas for the production of town gas as early as possible. In reply to Mr Jeffrey LAM's further enquiry, Mr CHAN confirmed that the savings in net gas charge quoted earlier had already taken into account freight charges for liquefied natural gas which were specified in the 25-year contract.

13. On using natural gas as the sole feedstock to generate town gas, Mr Alfred CHAN said that the issue should be considered in the context of the overall cost-effectiveness in gas production. In order to introduce natural gas to replace portions of naphtha as feedstock to generate town gas, HKCG had already put in place adequate financial resources to upgrade the new supply infrastructure and make necessary modifications to gas production plants. If natural gas were to be deployed as the sole feedstock, this would require substantial capital investment to meet the operational requirements which might not be cost-effective. Moreover, HKCG might run at risk when the natural gas supply was interrupted due to unexpected gas incidents such as breakdown of the plant facilities, freight problem, blockage of submarine pipes or accidents in receiving terminals/stations. On the other hand, the present arrangement would enable the company to switch back the production units from a dual feedstock mode to naphtha alone within a reasonable time to cater for any emergencies.

14. The Chairman enquired about the likelihood of the occurrence of the natural gas incidents as mentioned earlier. Mr Alfred CHAN recalled that a few years ago, due to the occurrence of a fire at a receiving station in Australia, the gas supply there had been suspended for two weeks, resulting in huge financial loss. In reply to the Chairman's further enquiry, Mr CHAN said that HKCG had kept a constant stock of naphtha that could ensure the production of town gas for 30 days.

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15. Mr Ronny TONG was concerned about the timing when customers could pay lower gas charge as a result of using natural gas as a feedstock in gas production. He also enquired whether there was any plan to replace the gas infrastructure to enable the full use of natural gas for town gas generation.

16. Mr LAU Chin-shek supported the improvements made to the ICA and welcomed the reduction in net gas charge. He also enquired about the timing when the reduction would be reflected in the gas bill and the extent of reduction.

17. Mr Alfred CHAN reiterated that if the use of natural gas as part of the feedstock for the production of town gas could commence as planned by end of this year, the resultant savings would be immediately reflected in the gas bill for the following month. The savings would approach 10% if the crude oil price upon the importation of natural gas in Quarter 4 this year was similar to the current level of US\$60 per barrel. In other words, customers could pay HK\$20 less for a monthly gas bill of HK\$200. On the use of fuel by HKCG, Mr CHAN said that the Company had used coal as feedstock for gas production for the first hundred years. Some thirty years ago, HKCG had changed to use naphtha which yielded a cleaner gas because the extremely low sulphur content of naphtha reduced the emission of sulphur dioxide during gas production. In resorting to use natural gas later this year, it might take the Australian supplier about three years to gradually ramp up its supply of natural gas by phases to reach the ultimate proportion of 60% in total gas production. On using natural gas as the sole feedstock for gas production, Mr CHAN further recapped that the plant facilities in Tai Po had been modified to a dual feedstock mode to use both natural gas and naphtha to minimize risk due to suspension in the supply of natural gas.

18. Mr Tommy CHEUNG remarked that the catering industry players who were HKCG's major customers would certainly welcome the forthcoming savings in net gas charge. He however said that there was a need to enhance the transparency of the Fuel Cost Variation Charge (FCVC) by disclosing the basis and formula for adjustment, and the actual savings arising from the use of natural gas as feedstock. He enquired whether the relevant information would be reflected in gas bills.

19. The Permanent Secretary for Economic Development and Labour (Economic Development) (PS/ED) said that to enhance the information for the monitoring by the Government, HKCG would provide the Government on or before 15<sup>th</sup> day of each month with the total cost and total quantity of each feedstock used in the preceding month and the corresponding forecast for the current month in relation to the FCVC, including the percentage savings in gas charge resulting from the use of natural gas as feedstock in respect of the preceding month. DS/ED2 assured members that in assessing the FCVC set by HKCG, the Government would make reference to international crude oil price and the imported price to ensure that the reduction in FCVC as a result of using natural gas would be passed onto consumers. He understood that HKCG was prepared to disclose the savings in the gas bill.

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20. Mr Alfred CHAN said that HKCG would reflect the savings clearly in the gas bill by comparing the original gas charge if naphtha would continue to be used as the sole feedstock with the new charge.

*Information and Consultation Agreement (ICA)*

21. Noting that the ICA was a voluntary agreement, Ir Dr Raymond HO was concerned whether it meant that HKCG could refuse to enter into such an agreement. DS/ED2 confirmed that the ICA was a voluntary agreement with terms and conditions mutually agreed between HKCG and the Government, including the need for HKCG to consult the Government in the event of tariff adjustments and major system additions; and to disclose certain corporate information to the public on an annual basis.

22. Echoing with Ir Dr Raymond HO on the concern that ICA was only a voluntary agreement, Mr Fred LI considered that the Administration should take the opportunity to review the role of HKCG in the overall energy sector of Hong Kong. Referring to the development of post-2008 electricity market in Hong Kong, he urged the Administration to consider whether HKCG should also be subject to similar regulation by the Government. Noting that ICA had stipulated certain procedures for HKCG to consult the Government in the event of tariff adjustments and major system additions, Mr Fred LI was concerned how the Administration could ensure that the information it had obtained from HKCG contained all relevant details. He also enquired about the definition of major system additions.

23. DS/ED2 highlighted the difference between the two energy markets and pointed out that electricity was an alternative to town gas but town gas could not replace electricity in many cases. Notwithstanding that HKCG was the sole gas supplier, it had not taken advantage of its unique position to manipulate the market and bring about adverse impact on consumers. DS/ED2 assured members that the Government would monitor the performance of HKCG closely. On major system additions, DS/ED2 explained that to enhance the information for the monitoring by the Government, HKCG would provide the Government annually with a breakdown of their planned and actual capital expenditure by major asset categories, with highlights of major new projects. The Government would have the overall picture and could follow up with HKCG on further information regarding major system additions if considered necessary. DS/ED2 recapped that in assessing information provided by HKCG in relation to FCVC, the Government would also make reference to information from other sources such as international crude oil price, and average import prices of naphtha obtainable from the Census and Statistics Department.

24. Mr Fred LI was unconvinced of the Administration's reply. He sought information on the market share of HKCG in the energy market and the Administration's action, if any, in case HKCG abused its market position. In response, PS/ED and DS/ED2 advised that HKCG's share in domestic water heating and cooking fuel market had remained relatively stable since 1994 with mild growth to above 60%. The Administration would conduct investigation if any business entity

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had abused its market position. Nevertheless, they did not see a need to regulate since HKCG had not abused its market position.

25. Mr CHAN Kam-lam welcomed the extension of ICA which helped increase the operational and financial transparency of HKCG. He also appreciated the good performance of HKCG in bringing about a stable gas tariff to benefit consumers. Mr CHAN was concerned whether the Government would also consider entering into similar agreements with suppliers of domestic liquefied petroleum gas (LPG) with a view to increasing transparency in their price setting process. Given the operational efficiency of HKCG, Mr CHAN urged the Government to enhance market competition by making available both town gas and LPG for the choice of general household customers.

26. PS/ED highlighted that oil companies sold domestic cylinder LPG on a wholesale basis to their dealers who then retailed to end-users. Domestic LPG was also supplied through pipes purposely built for housing estates. To promote competition, the Government had awarded contracts for the supply of piped LPG to public estates through open tenders. However, due to limited lands for setting up LPG compound, LPG might not be selected for certain estates. On domestic LPG, in order to enhance transparency in its pricing, a supplier has adopted a formula to review the LPG wholesale prices regularly, taking into account the import prices of LPG. On Mr CHAN Kam-lam's concern about the possibility for the Government to enter into agreements similar to ICA with domestic LPG suppliers, DS/ED2 said that this was not practicable because unlike town gas which was supplied solely by HKCG, there were many suppliers of domestic LPG in the market.

27. Mr CHAN Kam-lam suggested introducing more market competition in the energy market and shortening the interval for reviewing the wholesale price of cylinder LPG. DS/ED2 remarked that there was competition in the domestic fuel market. Notwithstanding the availability of pipes in delivering town gas, customers were free to choose to use domestic cylinder LPG or electricity. On the suggestion to shorten the review period for the LPG wholesale prices, DS/ED2 informed members that the Administration would discuss with the supplier.

28. Noting that under the ICA, HKCG was required to disclose certain corporate information to the public on an annual basis, Mr LAU Chin-shek was concerned whether HKCG's investment in the Mainland and overseas would affect Hong Kong's gas charge and whether the related information would be published.

29. DS/ED2 pointed out that under the ICA, HKCG would disclose information on its core gas business and gas-related activities in Hong Kong. Nevertheless, as HKCG was a listed company, members of the public might refer to HKCG's annual report for information related to HKCG's investment performance outside Hong Kong.

30. Mr Alfred CHAN confirmed that similar to other energy companies, HKCG had segregated the accounts of investments in Hong Kong and in Mainland/overseas markets.

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*Environmental measures*

31. Noting that 40% of the total gas production would still use naphtha as feedstock after the introduction of natural gas, Mr Jeffrey LAM was concerned about the measures to be taken by HKCG in reducing emissions from using naphtha and whether HKCG would pass the costs of such measures onto consumers.

32. Mr Alfred CHAN remarked that although HKCG's capital investment had not been linked to its return, the Company had made substantial and cost-effective investment in emission reduction facilities at the gas plants and other environmental measures from 2003-2005. For example, HKCG had installed de-nitrogen oxides system to units 1&2 of Tai Po phase 1 plants in 2005. Mr CHAN further said that apart from natural gas and naphtha, HKCG planned to introduce other types of fuel such as landfill gas (LFG), i.e. methane, which was a type of renewable energy. In fact, HKCG was the first organization in Hong Kong to utilize LFG for commercial use. On a pilot basis in 1999, HKCG built its first LFG utilization plant in Tai Po, laying a 2 kilometer of pipeline from Shuen Wan Landfill to the plant. HKCG planned to build another LFG treatment plant in Tai Po to utilize LFG released from Ta Kwu Ling Landfill through a 19 kilometer long pipeline with a view to using LFG to produce up to 5% town gas in respect of the total production.

*Customers and community services*

33. Mr WONG Ting-kwong noted and appreciated that HKCG was among the few public utilities which were not subject to critical review by Members. Recalling that the monthly maintenance charge had attracted much controversies when it was first set, Mr WONG was pleased to note that apart from regular safety inspection and general maintenance on town gas installations, HKCG would also provide free PE Link Check-up service to the elderly customers. He asked whether HKCG would consider offering other value-added services.

34. Mr Alfred CHAN highlighted that since 1998, HKCG had made an aggregate investment of some two billion while maintaining its tariff and fixed monthly maintenance charge. He said that the fixed monthly maintenance charge of \$9.5 covered regular safety inspections such as appliance check-ups and internal piping testing. Further to appointment services, to prevent problems before they occur, HKCG had introduced the Regular Safety Inspection Programme under which a safety inspection would be carried out for individual customer premises by qualified gas technicians during a 18-month cycle. To further enhance the safety of gas appliances, HKCG had installed with gas appliances a stainless steel braided flexible hose which was more durable and lasted longer. The Towngas 24-hour Customer Service Hotline had recently been geared up in January 2006 to facilitate communications between HKCG and its customers. On community services, Mr CHAN said that in addition to offering concession schemes for elderly and people with disabilities, the 'Towngas Volunteer Service Team' conducted regular visits to senior citizens in different districts to, inter alia, distribute bottles of hot soup/food and install safety rails for the elderly.

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35. Summing up the discussion, the Chairman expressed the support of the Panel to the planned extension to the ICA and the improvements to be made.

**V Proposed replacement of Civil Aviation Department's Air Traffic Control Radar Simulator**

(LC Paper No. CB(1)1116/05-06(04) - Information paper provided by the Administration)

36. At the invitation of the Chairman, the Deputy Secretary for Economic Development and Labour (Economic Development)1 (DS/ED1) introduced the Administration's proposal to replace the Civil Aviation Department (CAD)'s air traffic control (ATC) radar simulator at an estimated non-recurrent cost of \$16.5 million and highlighted the salient points as set out in the Administration's paper (LC Paper No. CB(1)1116/05-06(04)).

ATC radar simulator

*Justifications for replacement*

37. Noting that one of the functions of the radar simulator was to provide initial radar training, Mr CHAN Kam-lam queried whether it was necessary to replace the existing one with the most advanced model.

38. In response, DS/ED1 explained that the radar simulator was used to simulate ATC scenarios and evaluate the design of new air routes and flight operation procedures for aircraft landing at the Hong Kong International Airport (HKIA) and was also an important tool used to provide initial radar training for CAD's student air traffic controllers and refresher training for licensed controllers to meet their licensing requirements. The existing simulator was designed in the early 1990's and was approaching the end of its usable life. Due to its limited processing power and speed, the simulator lacked the capacity and functionality to cope with the complexity of present-day ATC simulation and evaluation. This limitation hampered the evaluation of possible new air routes or flight procedures aimed at improving ATC reliability and efficiency for the busy Pearl River Delta (PRD) airspace. The existing simulator also could not cope with the increasing training needs of controllers. In order to maintain a safe and efficient air transport system for Hong Kong, the Administration proposed to replace the existing simulator in time to support rationalization of airspace design and proper training of controllers.

39. On measures to enhance the efficiency of traffic flow and system capacity, Mr Howard YOUNG pointed out that it was necessary to achieve better coordination among different airport authorities in the PRD region so as to avoid incoming aircraft lingering in the air awaiting for landing. He remarked that the situation was undesirable as it would lead to extra fuel consumption by airlines. He therefore enquired how the new ATC radar simulator could help improve the situation and achieve better efficiency for the busy PRD airspace.

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40. DS/ED1 said that the ATC radar simulator was used to evaluate the design of new air routes and flight operation procedures for aircraft landing at the HKIA and nearby airports and aircraft overflying the 276 000 square kilometers Hong Kong Flight Information Region managed by CAD. With the replacement of the radar simulator, CAD would be able to better evaluate possible new air routes or flight procedures aimed at improving ATC reliability and efficiency for the busy PRD airspace.

41. Mr Howard YOUNG enquired whether CAD would consider using the ATC radar simulator for training purpose outside office hours so as to maximize its utilization rate. In this respect, he pointed out that it was the prevailing practice of airline companies to arrange flight simulation training for their pilots outside office hours.

42. DS/ED1 said that student and licensed air traffic controllers were required to receive a total of 300 hours of ATC radar simulator training over a period of six years. The Deputy Director-General of Civil Aviation (DDG, CAD) added that Cathay Pacific Airways had over 1 700 pilots that needed flight simulation training while CAD only had about 200 controllers required for radar simulator training each year. As such, all radar simulator training could be conducted during office hours.

43. Mr Jeffrey LAM enquired about the availability of spare time to rent out the new simulator for use by controllers of other airport authorities. In response, DDG, CAD pointed out that the Administration had maintained close liaison with other airport authorities in the Mainland, Macau and South East Asia. Should there be any requests for using the new simulator for training purpose, CAD would actively consider the suggestion.

*Delivery time*

44. While stating support for this proposal, Mr Albert CHENG expressed grave concern about the long delivery lead time of more than 21 months after the tender invitation. He expressed concern that under such circumstance, the new radar simulator might become obsolete, given the fast pace of technological development and breakthroughs. He therefore urged the Administration to expedite the procurement process. The Chairman also queried why it took seven months for the Administration to evaluate the tender proposals. He urged the Administration to shorten the evaluation stage.

45. DS/ED1 pointed out that the 21-month lead time was normal for similar projects and he undertook to consider members' suggestion to expedite the procurement process and shorten the evaluation stage.

46. Giving the long lead time to deliver the new simulator, Mr Albert CHENG sought explanation from the Administration whether the tender document would specify that the latest model would be delivered. In response, DDG, CAD said that the Administration would provide technical specifications in the tender documents.

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Prior to invitation of tender, the Administration would identify the latest technology available in the market for similar product that would be launched in the forthcoming 12 months and incorporate such information in the relevant tender documents.

*Usable life*

47. In view of the significant growth of air traffic in PRD in recent years, Mr Vincent FANG enquired about the usable life of the new ATC radar simulator. DS/ED1 replied that the new ATC radar simulator was projected to have a usable life of 15 years which was based on the forecast of growth in air traffic activities prepared by the Hong Kong Airport Authority (HKAA).

48. The Chairman noted that the usable life of the radar simulator was based mainly on the projected increase in the air traffic in Hong Kong without having regard to the development in the adjacent airports, such as Guangzhou and Macau. He asked whether the increase in air traffic in other airports in PRD would have an impact on the usable life of the new ATC radar simulator.

49. DS/ED1 replied that the new radar simulator should be able to simulate the real-life traffic in Hong Kong, taking into account the estimated increase in the air traffic movement in the coming 15 years. If there was a significant increase in air traffic movement for HKIA, the Administration would consider measures to address the additional demand.

50. On the projected usable life of the existing radar simulator, DS/ED1 advised members that the existing simulator was originally projected to have a usable life of 15 years but the actual air traffic movement had increased much more rapidly than the original projection so it had to be replaced after 12 years. If the radar simulator placement was delayed for another three years, the situation would be considered unsatisfactory as the existing simulator would then not be able to simulate the real-life air traffic scenarios in PRD.

51. Noting that the existing radar simulator could not meet the increase in air traffic and had to be replaced three years earlier before its projected time span, Mr SIN Chung-kai expressed concern on the accuracy of the projection for the increase in air traffic when the technical specification for the new simulator was prepared. He enquired about the basis for reaching at the present projected air traffic growth. DS/ED1 said that it would be difficult, if not impossible, to come up with an accurate assessment on future air traffic flow in the next 15 years. The latest projection was based on the best available data provided by the HKAA. He however pointed out that due to unforeseen circumstances, the actual rate of increase might vary.

52. Mr Albert CHENG said that in designing the processing power and capacity of the new radar simulator, the Administration should not use the usable life of the system as a basis, given the uncertainty associated with the air traffic growth and the fast pace of technological development and breakthroughs. As a more reliable yardstick for development, the Administration should consider adopting the ultimate design capacity

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of the HKIA as a basis for simulating the future air traffic scenarios. On the ultimate design capacity of the HKIA, DS/ED1 advised that the HKIA had the potential to handle a capacity of 87 million passengers and 9 million tonnes of cargo a year. However, the real-life air traffic scenario could vary significantly subject to changes in various factors, such as the mix of cargo flights and passenger flights, the size, types and mix of the aircraft using HKIA. Apart from these variables, the increase in air traffic movements in Macau, Guangzhou and Zhuhai would also have an impact on the Hong Kong airspace. He stressed that 15 years' usable life was just an estimate and the Administration would take into account other relevant factors in designing the new radar simulator.

53. Mr Albert CHENG remained unconvinced of the Administration's explanation and said that irrespective of the impact of different variables, the air traffic movement should be limited by the number of runways and time slots available for aircraft landing and taking off. In this connection, Mr SIN Chung-kai held the view that the processing power of the simulator should be able to simulate the ultimate design capacity of HKIA. He enquired about the relationship between the choice of the simulator and the capacity limit of HKIA.

54. DS/ED1 said there may not be a direct relationship between the number of flights handled by HKIA and the complexity of the airspace scenarios. He further clarified that the existing radar simulator had to be replaced as it could not simulate some new functions which had been incorporated into the actual ATC equipment operated by controllers, such as alert of potential conflicts between aircraft. The increase in the complexity of the air traffic scenarios in PRD would place a higher demand on the radar simulator. PS/ED advised that the Administration would consider the specification for the new ATC radar simulator taking into account the ultimate design capacity of HKIA and other relevant factors so that the requirement for the processing power and capacity of the new radar simulator could be ascertained more accurately.

55. In response to Mr CHAN Kam-lam's enquiry on the details of the tendering process, the manufacturing country of the new simulator and how the existing simulator would be disposed, DS/ED1 advised that the acquisition process would follow the usual tender procedures for Government procurement. Since the tender had not been awarded, the Administration was not able to advise on the manufacturing country of the proposed radar simulator at this stage. The Administration had not assessed the way of disposal of the existing simulator. Given that the existing simulator was designed in early 1990's and was still using 486-processor and could not cater to the present-day requirement, the residual value would be low. As such, it was unlikely that the existing simulator would be purchased by another party.

Coordination of different ATC authorities

56. Mr WONG Ting-kwong said that the limited air paths and the height restrictions imposed by the relevant Mainland authorities had already affected the local air traffic movements. Pointing out that some incoming aircrafts had to circle in the

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air awaiting for landing, he enquired whether the Administration had discussed with the Mainland authorities on measures to relieve the congestion problem.

57. DS/ED1 explained that there were three authorities responsible for airspace management within PRD. The airspace within the PRD region was managed largely by Guangzhou to the north and Hong Kong in the south and with Zhuhai managing an area in between. A tri-partite working group (the Working Group) comprising CAD, the General Administration of Civil Aviation of China and the Civil Aviation Authority of Macau was formed with the objectives to enhance safety, operational efficiency as well as airport and airspace capacity in the region. The Working Group had held five meetings to discuss the related technical issues, such as insufficient flight paths. It would put forward concrete proposals to tackle the congestion problem at HKIA and other PRD airports in due course.

58. Mr Jeffrey LAM pointed out that the Central Government supported Hong Kong to continue to serve as a logistics centre. While supporting the present proposal to upgrade the radar simulator for CAD, he pointed out that there had been suggestion for lining up an alliance between HKIA and other airports in PRD to enhance cooperation. He enquired whether the Administration had assessed the need to upgrade or replace the existing ATC management system to tie in with the changing circumstances.

59. DS/ED1 said that the discussion on the formation of an alliance between Hong Kong and other airports in PRD was at an early stage and the Administration had not assessed the impact of the alliance on the demand of the ATC management system. To achieve higher operation efficiency, the Administration had worked with different ATC authorities in PRD with a view to drawing up an enhanced management plan to optimize the use of airspace. DS/ED1 further explained that the Administration would take all relevant factors into consideration before coming up with a decision on the proposed upgrading or replacement of CAD's hardware for air traffic management, as in the present case for the proposed replacement of the ATC radar simulator.

Existing ATC management system

60. Noting that the present proposal was for the replacement of the radar simulator only, Mr WONG Ting-kwong enquired whether the Administration had planned to replace the existing ATC management system. In response, DS/ED1 replied that there was a need for CAD to overhaul its ATC management system to meet the demand for growing air services. The Administration was currently reviewing the system and would revert to the Panel in due course. He remarked that the cost for the new ATC management system would be much higher than the proposed radar simulator. The Chairman urged the Administration to expedite the review for early commissioning of the new ATC management system to meet the growth in air traffic in the region.

61. In summing up, the Chairman concluded that the Panel supported the Administration to submit the funding proposal to the Finance Committee.

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**VI Any other business**

62. There being no other business, the meeting ended at 12:30 pm.

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