

立法會
Legislative Council

LC Paper No. CB(1) 1040/07-08
(These minutes have been seen
by the Administration)

Ref : CB1/PL/EA/1

Panel on Environmental Affairs

Minutes of meeting
held on Monday, 28 January 2008, at 1:30 pm
in Conference Room A of the Legislative Council Building

Members present : Hon Audrey EU Yuet-mee, SC, JP (Chairman)
Hon Emily LAU Wai-hing, JP (Deputy Chairman)
Hon Martin LEE Chu-ming, SC, JP
Hon SIN Chung-kai, SBS, JP
Hon WONG Yung-kan, SBS, JP
Hon Howard YOUNG, SBS, JP
Hon LAU Kong-wah, JP
Hon Miriam LAU Kin-ye, GBS, JP
Hon CHOY So-yuk, JP
Hon LEE Wing-tat
Hon Jeffrey LAM Kin-fung, SBS, JP
Hon CHEUNG Hok-ming, SBS, JP

Members absent : Ir Dr Hon Raymond HO Chung-tai, SBS, S.B.St.J., JP
Hon Mrs Anson CHAN, GBM, JP

Public officers attending : **For item IV**

Environment Bureau

Mr Elvis AU

Principal Assistant Secretary for the Environment (Energy) 2

Electrical and Mechanical Services Department

Mr Alfred SIT

Assistant Director/ Energy Efficiency

Mr HO Sai King

Chief Engineer/ Energy Efficiency B

For Item V

Environment Bureau

Mr Edward YAU
Secretary for the Environment

Environmental Protection Department

Mr Carlson K S CHAN
Deputy Director of Environmental Protection (3)

Mr Benny WONG
Assistant Director of Environmental Protection (Air
Policy)

Mr Dave HO
Principal Environmental Protection Officer
(Air Science)

Dr Shermann FONG
Senior Environmental Protection Officer (Cross-Boundary
and International) 3

For Item VI

Environmental Protection Department

Mr Carlson K S CHAN
Deputy Director of Environmental Protection (3)

Miss Mary TSANG
Assistant Director (Cross-Boundary & International)

Dr Shermann FONG
Senior Environmental Protection Officer (Cross-Boundary
and International) 3

Environment Bureau

Miss Emmy WONG
Principal Assistant Secretary for the Environment
(Energy)1

Electrical and Mechanical Services Department

Mr Alfred SIT
Assistant Director/ Energy Efficiency

Mr Michael CHEUNG
Chief Engineer/ Energy Efficiency A

Mr HO Sai-king
Chief Engineer/ Energy Efficiency B

Advisory Council on the Environment

Dr NG Cho-nam
Member

Prof Paul LAM Kwan-sing
Member

Mr Edwin LAU Che-feng
Member

**Attendance by
invitation**

: For Item IV

Green Council

Ms Linda HO
Chief Executive Officer

Business Environment Council

Mr Kevin EDMUNDS
Chief Operating Officer

Hong Kong Construction Association

Mr Anthony CHAN
Honorary Secretary /
Vice-Chairman of Environmental Committee

Clean Air Action Group

Ms Yolanda NG
Convenor

Green Sense

Ms LO Ying-chi, Zara Abigail
Project Officer

Association of Engineering Professionals in Society

Ir Patrick YUEN
Hon-Secretary General

Civic Party

Mr Vincent NG

The Hong Kong Institute of Surveyors

Dr Paul HO
Vice Chairman, Public and Social Affairs Committee

The Hong Kong Institution of Engineers

Ir Peter WONG
Vice President

Democratic Alliance for the Betterment and Progress of
Hong Kong

Mr Ricky WONG
Deputy Spokesman on Environmental Policies

Energy Efficiency and Conservation Subcommittee

Dr MAN Chi-sum
Chairman

The Hong Kong Association of Property Management
Companies

Mr Andrew LEE
Chairman, Professional Practice Committee

The Hong Kong Institute of Architects

Mr K S WONG
Chairman, Board of Local Affairs

Friends of the Earth (HK)

Mr Hahn CHU
Environmental Affairs Manager

Hong Kong Association of Energy Engineers

Mr Otto POON
President

Clerk in attendance : Miss Becky YU
Chief Council Secretary (1)1

Staff in attendance : Mrs Mary TANG
Senior Council Secretary (1)1

Miss Mandy POON
Legislative Assistant (1)4

Action

I. Confirmation of minutes

(LC Paper No. CB(1) 646/07-08 — Minutes of the meeting held on
17 December 2007)

The minutes of meeting on 17 December 2007 were confirmed.

II. Information paper issued since last meeting

2. Members noted the following information paper and agreed that this should be forwarded to the Administration for response –

LC Paper No. CB(1) 621/07-08(01) — Submission from Green Sense
regarding the disposal of used
televisions

III Items for discussion at the next meeting

(LC Paper No. CB(1) 647/07-08(01) — List of follow-up actions
LC Paper No. CB(1) 647/07-08(02) — List of outstanding items for
discussion)

3. Members agreed to discuss the following subjects at the next regular meeting on Monday, 25 February 2008, from 1:30 pm to 4:30 pm –

- (a) Proposed mandatory provision of refuse storage and material recovery room on each floor of new residential buildings;
- (b) Revision of Fees and Charges under Noise Control Ordinance (Cap. 400) and Merchant Shipping (Prevention and Control of Pollution) (Charges for Discharge of Polluting Waste) Regulation (Cap. 413I); and

(c) Progress of measures to improve air quality

(Post-meeting note: Pursuant to members' decision, item (a) was replaced by and subsumed under the wider issue of "Update on the progress of the key initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)", which would also cover the report on the "Site selection for the development of the Integrated Waste Management Facilities" circulated vide LC Paper No. CB(1) 724/07-08.)

IV. Proposed mandatory implementation of the Building Energy Codes

4. The Principal Assistant Secretary for the Environment (Energy) 2 (PAS(EG)2) briefed members on the proposal on the mandatory implementation of the Building Energy Codes (BECs) for certain new and existing buildings, which aimed to improve energy efficiency of buildings, alleviate global warming and combat air pollution. He said that a three-month public consultation on the proposal had been launched.

Meeting with Green Council

(LC Paper No. CB(1) 647/07-08(03))

5. Ms Linda HO, Chief Executive Officer, said that the Green Council would support the proposal on the mandatory implementation of BECs. Instead of conducting energy audit once every 10 years as proposed by the Administration, consideration should be given to performing it once every five years, in order to keep abreast with the latest technological development around the world. While supporting the awarding of energy marks to buildings that had exceeded the minimum building energy efficiency standards, this should not be based solely on energy efficiency performance, but also on general environmental performance in respect of indoor air quality, water conservation, use of building materials, design and planning of buildings etc. Similar to the practice overseas, consideration could be given to providing incentives, such as calculation of gross floor area, for buildings with high energy efficiency performance. There was also a need to promote public awareness on energy efficiency performance in existing buildings.

Meeting with Business Environment Council

(LC Paper No. CB(1) 647/07-08(04))

6. Mr Kevin EDMUNDS, Chief Operating Officer, said that the Business Environment Council supported in principle the mandatory implementation of BECs complemented by recognition for higher levels of energy efficiency performance. However, the proposal should be framed explicitly in the context of the September 2007 APEC Declaration and its targets and timeframes i.e. the extent to which the mandatory implementation of BECs could reduce Hong Kong's energy intensity by 2030. Furthermore, BECs should be sufficiently rigorous to ensure that the required levels of reduction could be achieved. By way of illustration, the current BECs only specified the efficiency of systems, but not the way in which these systems should be effectively used. To this end, more effective system control

parameters, such as intelligent/automated controls for lighting, cooling and ventilation, etc, should be included in BECs in future. As regards the recognition for buildings which exceeded the prescribed levels, the Council would recommend that the existing initiatives such as the Building Environmental Assessment Method (BEAM) green building label should be maintained rather than introducing a completely new administrative framework. Meanwhile, the Council was seeking to develop a local version of the Australian Building Greenhouse Rating Scheme as a means to complement the benchmarking and improvement of energy efficiency in BEAM for existing buildings.

Meeting with Hong Kong Construction Association (HKCA)
(LC Paper No. CB(1) 647/07-08(05))

7. Mr Anthony CHAN, Honorary Secretary/Vice-Chairman of Environmental Committee, said that HKCA supported the Blue Sky Campaign and was committed to an industry Clean-Air Charter in 2007. It would strive to minimize contamination to the environment at the construction phase and work hand in hand with all other stakeholders. HKCA would support the proposal on the mandatory implementation of BECs. It held the view that savings in operating costs would outweigh the increase in capital cost in the design, construction and equipment associated with the compliance of BECs. The choice of environment-friendly materials and equipment, if incorporated in the design stage of new buildings, should not have much impact on the overall development cost and schedule for completion. However, there was a need to review the applicability of BECs to existing buildings on a case-by-case basis to ensure that any retrofitting was practical and feasible. The Government should also facilitate researches on best practices for retrofitting buildings to assist owners concerned to comply with BECs.

Meeting with Clean Air Action Group
(LC Paper No. CB(1) 647/07-08(06))

8. Ms Yolanda NG, Convenor, said that the Clean Air Action Group supported in principle the mandatory implementation of BECs. It considered that all new buildings should comply with the codes without exemptions. Government buildings and public organizations should take the lead in complying with BECs. As for the existing buildings, they should be required to replace building service installations to take account of wear and tear and to comply with BECs when major retrofitting projects were to take place. A reasonable transitional period for compliance with BECs should be set, on condition that this would not cause undue burden to the parties concerned. Apart from energy efficiency installations, other environment-friendly features, such as the provision of more windows to reduce the reliance on air-conditioning, use of materials which were less heat absorbent for outer wall, proper positioning of air-conditioning systems and provision of green rooftops etc, should also be incorporated in the building design. Consideration should be given to providing incentives, including tax concessions for developers of new buildings and low interest loans for owners of existing buildings, to facilitate compliance with BECs. Sufficient manpower resources should also be provided to ensure the successful implementation of BECs.

Meeting with Green Sense

(LC Paper No. CB(1) 647/07-08(07))

9. Ms LO Ying-chi, Zara Abigail, Project Officer, said that Green Sense was supportive of the proposed mandatory implementation of BECs. Given that commercial buildings had better capability to accept additional requirements for compliance, consideration should be given to requiring all existing commercial buildings to comply with BECs by 2015. All major retrofitting projects in existing commercial buildings should also comply with BECs. Furthermore, measures should be taken to improve the lighting efficiency standards and to address the problem of light pollution arising from excessive lighting from advertisement signboards. In the long run, more energy efficient practices should be contemplated to conserve energy.

Meeting with Association of Engineering Professionals in Society Ltd (AEPS)

(LC Paper No. CB(1) 647/07-08(08))

10. Ir Patrick YUEN, Hon-Secretary General, said that AEPS considered that the implementation of BECs would help fulfill Hong Kong's responsibility in reducing greenhouse gas emissions. However, there was a need to ascertain the inefficacy of the voluntary Hong Kong Energy Efficiency Registration Scheme for Buildings (HKEERSB) to ensure the success of the mandatory implementation of BECs. While agreeing that commercial buildings should be covered under the mandatory implementation of BECs, it was not considered advisable to include residential buildings at the start. BECs should be practical and its implementation should not create inconvenience and disruption to the affected parties. Consideration should also be given to providing existing buildings with incentives and encouragement to enhance the effectiveness of BECs.

Meeting with The Civic Party

(LC Paper No. CB(1) 647/07-08(09))

11. Mr Vincent NG said that the Civic Party would support the mandatory implementation of BECs in view of the ineffectiveness of the voluntary HKEERSB. The coverage of the mandatory scheme should not be confined to new commercial buildings and the communal areas of new residential and industrial buildings, but should be extended to cover public facilities such as schools, hospitals, clinics, libraries, sports stadium etc. Government buildings under construction should take the lead in complying with BECs, the cost of which should form part of the construction cost. Subject to variations to minimize possible practical difficulties, the Civic Party would support that mandatory measures should also be pursued for existing buildings in order to achieve as much environmental benefits as possible. As such, it would accept that all major retrofitting works in existing commercial buildings and the communal areas of residential and industrial buildings should comply with BECs. To maintain the energy efficiency standards, the Government should establish a mechanism to review these standards on a regular basis. A tiered system whereby all covered buildings were required to comply with the minimum

standard should also be introduced. Recognition in the form of an energy mark should be awarded to building developers and owners who attained an energy efficiency standard higher than the minimum standard by a prescribed percentage.

Meeting with The Hong Kong Institute of Surveyors (HKIS)
(LC Paper No. CB(1) 666/07-08(01))

12. Dr Paul HO, Vice Chairman, Public and Social Affairs Committee, said that HKIS supported in principle the mandatory implementation of BECs. It shared the view that the scheme should not be confined to new commercial buildings and the communal areas of new residential and industrial buildings, but should be extended to cover existing Government buildings and public facilities, in line with fire prevention regulations. However, the Director of the Electrical and Mechanical Services should be empowered to exempt certain buildings, such as care centres for the elderly, churches and non-profit organizations, from complying with BECs. The compliance procedures, which would require developers of new buildings to submit a self-declaration to be certified by recognized professionals to Electrical and Mechanical Services Department (EMSD) upon approval of building plans by the Building Authority, should be simple and easy to follow. A Certificate of Compliance would be issued upon receipt of the final self-declaration, supporting documentation and test reports. A roadmap and timetable should be provided for the mandatory implementation of BECs.

Meeting with The Hong Kong Institution of Engineers (HKIE)
(LC Paper No. CB(1) 647/07-08(10))

13. Ir Peter WONG, Vice President, said that HKIE supported in principle the mandatory implementation of BECs. As the present criteria and coverage of BECs were quite minimal, HKIE would strongly advocate that the proposed mandatory scheme should be further developed into a more comprehensive programme to cover not only new commercial buildings and communal areas of new residential and industrial buildings, but also all indoor communal areas of commercial, residential and industrial buildings. The performance-based codes would need to be suitably expanded to provide for more comprehensive application in large-scale projects, such as hospitals. It was hoped that the proposal would be the first step in the right direction to ensure building energy efficiency in Hong Kong.

Meeting with Democratic Alliance for the Betterment and Progress of Hong Kong (DAB)
(LC Paper No. CB(1) 647/07-08(11))

14. Mr Ricky WONG, Deputy Spokesman on Environmental Policies, said that while DAB was supportive of the proposed mandatory implementation of BECs, it would request that exemptions should be granted to buildings of over 30 years with low rateable values. This was because these buildings were mostly occupied by people with limited means who could not afford to pay for the installations to comply with BECs unless they were subsidized by the Government under the building maintenance schemes. As industrial and commercial buildings would have higher energy consumption, they should be required to conduct energy audits and take

improvement measures as appropriate. The Government should also work out more comprehensive guidelines on measures to conserve energy in buildings, such as green rooftops, use of renewable energy, improvement in building designs etc. Meanwhile, existing residential buildings should be required to incorporate energy efficiency measures in major retrofitting projects with a view to complying with BECs. There was also a need to formulate review mechanisms on energy efficiency performance, including lighting standards. To streamline procedures, compliance inspections in respect of BECs and the Electricity (Wiring) Regulations on building installations should be carried out concurrently once every five years. The community should be made aware of the implementation details of BECs and necessary assistance should be provided to the owners corporations to facilitate compliance.

Meeting with Energy Efficiency & Conservation Subcommittee (EE & C Subcommittee)
(LC Paper No. CB(1) 647/07-08(12))

15. Dr MAN Chi-sum, Chairman, said that EE&C Subcommittee supported the proposal on the mandatory implementation of BECs. It accepted that the proposal should apply to new commercial buildings and communal areas of new residential and industrial buildings as well as major retrofitting projects of existing buildings. Spot checks and energy audits in every 10 years should be conducted to ensure compliance and to identify areas for energy savings respectively. To facilitate compliance with BECs, financial assistance should be provided by the Government to building owners who might not be able to afford the retrofitting costs. However, the EE&C Subcommittee was concerned about the availability of sufficient recognized professionals to certify compliance with BECs, and the lack of control under BECs for excessive lighting of advertisement signboards which had been a nuisance to the public.

Meeting with The Hong Kong Association of Property Management Companies Ltd
(HKAPMC)
(LC Paper No. CB(1) 647/07-08(13))

16. Mr Andrew LEE, Chairman, Professional Practice Committee, said that HKAPMC was supportive of the proposed mandatory implementation of BECs. It agreed that the proposal should cover all new buildings, Government buildings, existing commercial and office buildings under major renovation, and existing residential/industrial building under major renovation (common areas only). Partial compliance should be allowed if the major renovation did not cover all facilities in the building. A reasonable transitional period should be provided for existing buildings to improve their energy efficiency performance to facilitate compliance with BECs. Consideration should be given to introducing a tiered arrangement such that buildings which could achieve higher energy efficiency than the minimum standards set by EMSD under BECs for all buildings would be accorded recognition to encourage better environmental performance. An assistance scheme should be established to provide financial support to building owners. On the other hand, property management agencies who acted in accordance with the instruction of building owners/Incorporated Owners should not be held liable for failure in obtaining and

renewing Certificate of Compliance within the specified period. There should also be a clear penalty system.

Meeting with The Hong Kong Institute of Architects (HKIA)
(LC Paper No. CB(1) 666/07-08(02))

17. Mr K S WONG, Chairman, Board of Local Affairs, said that HKIA held the view that the Government should set out a holistic framework to effectively address the issues of energy efficiency and carbon emissions in buildings with a clear target and milestone. Both "regulatory push" and "market pull" should be formulated timely and synergistically in order to yield effective results in response to critical global and local environmental challenge.

Meeting with Friends of the Earth (HK) (FOE)
(LC Paper No. CB(1) 682/07-08(01))

18. Mr Hahn CHU, Environmental Affairs Manager, said that FOE supported in principle the mandatory implementation of BECs as voluntary compliance did not appear to be forthcoming in Hong Kong. There were a lot more to be done to improve energy efficiency and these would include the revision of lighting standards to reduce excessive lighting. More incentives should be introduced to encourage the implementation of measures to improve the energy efficiency performance of buildings.

Meeting with Hong Kong Association of Energy Engineers

19. Mr Otto POON, President, said that the use of fossil fuel for power generation was not only polluting but also expensive. As voluntary compliance with BECs was not effective, there was a need for the mandatory implementation of BECs. With the rapid advancement in technology, there would be a need for regular updating on BECs. The engineering profession would play a supporting role in the mandatory implementation of BECs.

20. The Chairman also drew members' attention to the submission (LC Paper No. CB(1) 666/07-08(03)) from Green Power which had not attended the meeting.

Meeting with the Administration

(LC Paper No. CB(1) 504/07-08(01) — Consultation document on the mandatory implementation of the Building Energy Codes

LC Paper No. CB(1) 647/07-08(14) — Paper on building energy efficiency prepared by the Legislative Council Secretariat (Background brief)

21. PAS(EG)2 said that the Administration would carefully consider the views put forward by deputations in deciding the scope and implementation details of BECs, taking into account practicality and cost effectiveness.

22. Mr Howard YOUNG was pleased that the proposal had the general support from the community. Noting that some deputations had suggested including Government facilities, such as hospitals and schools, under the mandatory scheme, he enquired if this would incur additional cost and technical difficulties. He also asked if the payback period of six years for the additional investment by owners of commercial buildings would apply to Government facilities. PAS(EG)2 said that the mandatory implementation of BECs would apply to commercial buildings because the commercial sector consumed 37% of the energy used in Hong Kong. The Administration would consider the views and suggestions from deputations regarding the proposed inclusion of Government facilities under the scheme, taking into account technical adjustments that might be required for certain facilities to comply with BECs, the nature of services provided and the intended uses,. As regards the payment back period, it was expected that the same principle would apply to Government facilities, except for renewable energy installations which would require a longer payback period. The Assistant Director/ Energy Efficiency (AD/EE) said that the Government had formulated guidelines on energy efficiency performance of buildings for reference by Government departments. Some flexibility would need to be applied to take account of the nature of services provided by the departments. The Chief Engineer/ Energy Efficiency B, EMSD added that some schools had already participated in the voluntary implementation of BECs.

23. Ms Emily LAU thanked deputations for attending the meeting and sought their views on the extension of scope of BECs. Mr Anthony CHAN/HKCA said that HKCA would support extending the scope to cover Government facilities, such as schools and hospitals, especially if these were under renovation. Ms LAU said that she supported the early implementation of BECs and the extension of the scope of application of the scheme. She also agreed that the Government should take the lead in implementing BECs in its buildings without having to await the passage of the relevant legislation. In reply, PAS(EG)2 confirmed that the Government had been taking the lead in implement BECs in its buildings and a set of guidelines had been issued to departments in 2005. Taking into account views received during the consultation period, consideration would be given to extending the scope of application of BECs. The Administration planned to introduce the legislative proposal into the Legislative Council within the 2009/2010 legislative year. The proposed mandatory implementation of BECs would apply to new buildings, which amounted to about 500 to 600 per year, and certain existing buildings under renovation. In response to the Chairman, PAS(EG)2 explained that BECs would only be applicable to the communal areas of residential buildings and not the interiors because each unit would be different from the other.

24. Miss CHOY So-yuk welcomed the proposed mandatory implementation of BECs. She opined that residential buildings would tend to be more energy efficient than commercial buildings because the latter were usually equipped with central air-conditioning, leaving little or no room to reduce energy consumption. She asked the Hong Kong Association of Property Management Companies Ltd (HKAPMC) whether measures could be introduced to reduce energy consumption in commercial buildings. Mr Andrew LEE/HKAPMC said that management

companies would endeavour to comply with BECs since energy conservation was part of the professional services rendered by management companies. He nevertheless agreed that occupiers of residential buildings seemed to be more conscious of the need to conserve energy than those of commercial buildings.

25. The Chairman sought the Administration's views on the deputations' request for higher energy efficiency standards as well as their concerns about excessive lighting from advertisement signboards and the need to tighten lighting efficiency standards. PAS(EG)2 said that the energy efficiency standards adopted under the voluntary implementation of BECs in 1998 had since been updated twice in 2005 and 2007. EMSD was expected to review these standards every five years to ensure that they were up to date and in line with latest international trends and requirements. Consideration would be given to the compatibility with BEAM when giving recognition to buildings which could achieve better energy efficiency to encourage superior environmental performance. As regards lighting from advertisement signboards, PAS(EG)2 said that under the proposed mandatory BECs, energy audits would be performed on certain commercial buildings to avoid energy wastage as far as possible. On review of lighting efficiency standards, AD/EE said that a review had been conducted with the trades in March 2007 taking into account user requirements and the standards had since been tightened. Regular reviews would be undertaken every five years.

26. Mr LEE Wing-tat sought deputations' views on the feasibility of achieving zero emission. Mr Hahn CHU/FOE said that zero emission could only be achieved with the commitment of the community. The choice of building materials and the design of buildings etc would indeed affect the environmental performance of buildings. By way of illustration, the use of glass panels for outer walls of buildings would tend to increase the indoor temperature, leading to more energy consumption on air-conditioning. Ir Peter WONG/HKIE said that there were practical difficulties in achieving zero emission given the density of development in Hong Kong. Besides, the weather and humidity in Hong Kong increased the reliance on air-conditioning. Hence, there was a need for determination and commitment on the part of the community to achieve the goal of zero emission. He was aware that some of the newer developments in the north western part of the Mainland were pursuing zero emission. Mr Otto POON/Hong Kong Association of Energy Engineers said that it would not be possible for Hong Kong to achieve zero emission given the height and density of building developments. Through the Chair, PAS(EG)2 said that zero emission had yet to be achieved by any country in the world as there were restrictions and difficulties which had to be overcome in order to achieve this goal. The mandatory implementation of BECs would improve the energy efficiency of buildings. It would also be a practicable means to reduce emissions since buildings consumed about 89% of electricity used in Hong Kong.

V. Progress of measures to improve air quality

- (LC Paper No. CB(1) 647/07-08(15) — Administration's paper on progress of measures to improve air quality
- LC Paper No. CB(1) 647/07-08(16) — Paper on air pollution control prepared by the Legislative Council Secretariat (Background brief)
- LC Paper No. CB(1) 666/07-08(04) — Report on the Mid-term Review of the Pearl River Regional Air Quality Management Plan)

27. The Secretary for the Environment (SEN) briefed members on the latest progress of measures to improve air quality and to meet the emission reduction targets by 2010. He recapped that back in April 2002, the Hong Kong Special Administrative Region Government (HKSARG) and the Guangdong Provincial Government (GPG) reached a consensus to reduce, on a best endeavour basis, the anthropogenic emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x), respirable suspended particulates (RSP) and volatile organic compounds (VOC) by 40%, 20%, 55% and 55% respectively in the Pearl River Delta (PRD) Region by 2010, using 1997 as the base year. The consensus was reached with reference to the then forecast on the growth rates of the economy, population, electricity consumption and vehicle mileage in the PRD region in 2010, using 1997 as the base year. As the forecast growth in various areas might well have exceeded the estimates made in 2002 following the rapid economic developments in the Region, the two sides therefore launched the Mid-term Review of the PRD Regional Air Quality Management Plan (the "Mid-term Review") in November 2006 to jointly examine the forecasts on the regional pollutant emission trends, assess the effectiveness of existing emission reduction measures and, where necessary, formulate additional control measures to further reduce emissions in order to fully achieve the mutually agreed reduction targets by 2010. To reflect more accurately the actual emission situation then, the 1997 emissions were recalculated under the Mid-term Review. Findings of the Mid-term Review indicated that the economy, population, electricity consumption and vehicle mileage in the PRD Economic Zone would far exceed the assumptions in 2002. To further strengthen control on air pollutant emissions so as to achieve the reduction targets, additional control measures should be introduced to target at various emission sources in the Region. It was estimated that with the implementation of the additional control measures, the emission reduction targets could be achieved.

28. Noting with concern that the emissions from some of the polluting sources in the PRD Economic Zone had not been taken into account when setting the 2010 emission reduction targets, Mr LEE Wing-tat enquired if the Administration was still optimistic that the said targets could be achieved by 2010. SEN said that the purpose of the 2010 emission reduction targets was meant to seek cooperation from both sides to take forward emission reduction measures to improve air quality. With the rapid economic developments in the PRD Region, the forecast growth in various areas might well have exceeded the estimates made in 2002 and there was a need for regular updates. Therefore, in 2005, both sides had jointly compiled a handbook on the

methodology and protocols for the preparation of air emission inventory (the "Handbook"). To reflect more accurately the actual emission situation and provide a consistent basis for comparison, the 1997 emissions were recalculated under the Mid-term Review in accordance with the methodologies enshrined in the Handbook.

29. Ms Emily LAU noted that the findings the Mid-term Review projected that the economy, population, electricity consumption and vehicle mileage in the PRD Economic Zone would increase by 509%, 56%, 158% and 319% respectively in 2010 compared to the 1997 levels, which far exceeded the assumptions in 2002. With the implementation of additional control measures, it was estimated that the emissions of SO₂, NO_x, RSP and VOC would be reduced to the extent that the emission reduction targets could be achieved by 2010. She enquired if both sides were ready and able to introduce these additional control measures, given the increasing trend of emissions. SEN agreed to the need for both sides to make extra efforts to reduce emissions. Discussions on the additional control measures that should be taken to improve the present situation had been held with GPG, which had undertaken to implement additional control measures to introduce NO_x removal (de-NO_x) for newly built power plants, tighten the standards of air pollutant emissions for local boilers, enhance cleaner production requirement for VOC-containing products, limit the VOC contents of consumer products, tighten control on emissions from local vessels etc. Meanwhile, HKSARG had imposed emission caps on the two local power companies. Effort had also been made to promote cleaner production technologies and practices for Hong Kong-owned factories in the PRD Region.

30. Ms Miriam LAU said that she was equally concerned about the emission problem in the PRD Region. She stressed that the relocation of some of the polluting industries to the more remote parts of the Mainland was not the real solution to the problem. With the improved economy, there was an increase in the number of vehicles in the PRD Region which had led to more vehicular emissions. To this end, more should be done by the Mainland authorities to resolve the problem associated with the use of low quality vehicle fuel. The switch to the more environment-friendly fuels with low sulphur content was one possible means, but this was a national policy and could not be implemented by individual provinces alone. In this connection, she asked if the Administration had liaised with GPG on the fuel policy and the emission problem. SEN said that much had been done by both sides in reducing industrial emissions through measures such as the use of cleaner production technologies in the factories in PRD Region. Talks had also been held with GPG on the means to resolve the pollution arising from vehicular emissions and the HKSARG would be willing to share its experiences with GPG on the use of cleaner fuel.

31. The Chairman noted that there was a 28% rise in the 1997 VOC emissions after the recalculation of emission inventory. She was concerned about the difficulties in meeting the moving emission reduction targets which called for increased efforts. SEN said that there was a need to update the emission figures on both sides taking into account the latest developments. More efforts would be needed to deal with the increased emissions. By way of illustration, following the phased enforcement of the new regulation on VOC in April 2007, restrictions had been imposed on VOC content of architectural paints/coatings, printing inks and selected

consumer products. Lithographic heatset printing machines were also required to be installed with emission control devices from 1 January 2009. According to the findings of the Mid-term Review, implementation of the existing preventive and control measures should be able to reduce VOC emission by 55% compared to 1997 levels by 2010, thereby meeting the emission reduction targets. DDEP(3) said that the increase in the 1997 VOC emissions was mainly due to more accurate estimation of VOC emissions and wider coverage of polluting sources. For example, the usage of architectural paints/coatings and printing inks were now more accurately account for and evaporation of petrol from motor vehicles were included in the estimates. These adjustments explained the reason for the 28% increase in the 1997 VOC emissions as compared to the study made in 2002. A review would be made after the regulatory control on VOC was implemented.

32. Owing to time constraints, the Chairman consulted members on the need to continue discussion on the subject at the next regular meeting on 25 February 2008. Ms Emily LAU added that to allow sufficient time for discussion, particularly on the Mid-term Review, the next meeting should start at 1:30 pm instead of 2:30 pm. Members agreed.

VI. Government efforts in addressing climate change

- (LC Paper No. CB(1) 647/07-08(17) — Referral arising from meeting between LegCo Members and members of Eastern District Council on 7 June 2007
- LC Paper No. CB(1) 647/07-08(18) — Administration's paper on Government efforts in addressing climate change
- LC Paper No. CB(1) 647/07-08(19) — Paper on greenhouse gas emissions and their effects on global warming prepared by the Legislative Council Secretariat (Background brief)

33. DDEP(3) briefed members on the Government's efforts and initiatives in addressing climate change by highlighting the salient points in the information paper.

34. On behalf of the Advisory Council on the Environment (ACE), Dr NG Cho-nam said that the measures to address climate change were discussed at the ACE meeting on 14 January 2008 and ACE members concluded that –

- (a) it was not opportune at this stage to impose a cap on carbon dioxide (CO₂) emission on power plants having regard to the technical constraints and fuel mix consideration;
- (b) emission reduction target for CO₂ should be pursued in the long run to keep in pace with international development; and

- (c) emission reduction target for CO₂ if set in the long run, should apply to all sectors using a multi-pronged approach.

Dr NG further said that it was not practical to set a cap on CO₂ emission on power plants as there was yet no effective means to reduce such emission from power generation using fossil fuels. It would pose immense difficulties to the power companies if an emission cap on CO₂ was imposed at this stage. Besides, there was a need for objective criteria and scientific basis in setting an emission cap on CO₂ and further studies were required. Mr Edwin LAU/ACE said that while emission reduction targets for SO₂, NO_x, RSP and VOC were set for 2010, these were not applicable to CO₂. Consideration could be given to setting milestones for the reduction of CO₂ emissions. More efforts should be made by the general community to tackle global warming through energy conservation, reduction in vehicular emissions and proper waste management. Prof Paul LAM/ACE echoed that public participation and cooperation from the industrial/power sector were both essential to address the problem of global warming. There might be a need for a timetable to work out the emission reduction targets for greenhouse gases (GHG), including CO₂, but more studies would be required.

35. Ms Emily LAU was disappointed at the conservativeness of ACE on the imposition of an emission cap on CO₂. She noted that unlike other developed cities in the world, Hong Kong was not obliged to make any commitment to reducing GHG emissions. This was because Hong Kong was a part of China which was one of the non-Annex I Parties (comprising mainly developing countries) to which the mandatory emission targets on six main GHG assigned by the 1997 Kyoto Protocol to the 1992 United Nations Framework Convention on Climate Change did not apply. She failed to see why Hong Kong, which was comparable in many ways to most other developed cities in the world, could be excluded from such obligation. Dr NG Cho-nam/ACE said that Hong Kong was a relatively small emitter of GHG and its level of GHG emissions per capita was considerably lower than most of the developed countries. The low GHG emissions per capita might be attributable to the relocation of industries across the border and the density of development. Therefore, Hong Kong should be able to comply with mandatory emission targets on GHG even though this did not apply to Hong Kong.

36. The Chairman enquired about the methodology for assessing the GHG emissions per capita in Hong Kong and whether this was in line with international standards. She also enquired about the time frame for setting the emission reduction targets for GHG. DDEP(3) said that the basis for calculating the GHG emissions per capita was the same as that adopted by other countries in the world where emissions associated with travels on planes had not been taken into account in the assessment. In Hong Kong, over 60% of the total GHG emissions were from power generation while over 16% from vehicles and another 12% from landfills. To reduce GHG emissions, there was a need to reduce the reliance on coal for power generation and increase the usage of more environment-friendly fuels, such as natural gas. However, there were problems, including the choice of site for natural gas receiving terminals, which had yet to be resolved in order to ensure a steady supply of natural gas. The energy policy and fuel mix for power generation would also have to be reviewed

before consideration could be given to setting a time table on the emission reduction targets for GHG.

37. Ms Miriam LAU accepted that power companies would have difficulties in complying with the CO₂ emission cap if there were no effective means to reduce such emission during power generation. To tackle the problem of global warming, there was a need for the community to make efforts to reduce emissions. She enquired about the progress of development of renewable energy (RE) and the feasibility of developing it on a larger scale. DDEP(3) agreed that public participation, particularly in respect of energy conservation, was essential in addressing the problem of global warming. The Administration would step up publicity and educational efforts to promote public awareness in this respect. By way of illustration, the public had been encouraged to keep the indoor room temperature at 25.5°C during the summer months to conserve energy. On RE, DDEP(3) said that the two power companies were conducting feasibility studies on the development of off-shore wind-farms. Solar cell panels were being installed in some buildings to make use of solar energy. Landfill gas from the North East New Territories Landfill had already been used as fuel for producing town gas. Similar arrangements were being explored with the landfill gas from other strategic landfills. Ms LAU opined that more incentives should be provided to encourage developers to provide RE facilities in their building developments.

38. Ms Miriam LAU expressed concern about the requirement for bus companies to provide regular bus services during non-peak hours as part of their service pledge. This had not only increased the operating costs, including fuel cost, on the part of bus companies but also emissions as a large number of franchised buses were running on the roads with few passengers on board. However, District Councils were reluctant to deal with this thorny issue as this would likely attract objections from the public. Ms Emily LAU suggested that the Chairman should move a motion on behalf of the Panel to solicit support from political parties for the introduction of bus route rationalization schemes.

39. Mr Martin LEE said that Members of the Democratic Party had all along supported the implementation of bus-bus interchange (BBI) schemes to relieve traffic congestion at the Central Business District while achieving further improvements in air quality. Under the BBI schemes, all cross-harbour bus traffic coming from Kowloon and the New Territories via Western Harbour Crossing or Cross Harbour Tunnel/Eastern Harbour Crossing should terminate at Sheung Wan and Causeway Bay respectively. Interchange passengers could then make use of shuttle services ran by environmental-friendly buses for onward journeys to the Central Business District. While the proposal did have the support from the then Secretary for Transport, it was not welcome by District Councils on grounds of objections from the local community. He would request the Administration to re-consider the proposal for the benefit of the environment. At members' request, the Administration undertook to provide the latest development on the BBI schemes.

Interdepartmental Working Group on Climate Change (IWGCC)

40. Noting that the incumbent chairman of IWGCC was at the rank of Deputy Director of Environment Protection, Ms Emily LAU held the view that an official at a much higher rank should be appointed to steer IWGCC. The Chairman agreed that the chairman of IWGCC should be of a sufficiently high rank to command respect. She recalled that when the motion on "Responding to Climate Change" was moved at the Council meeting on 28 November 2007, Miss CHOY So-yuk requested that IWGCC should be set up under the leadership of the Chief Executive to demonstrate the Government's determination to respond to climate change as well as to better coordinate the efforts of relevant departments in formulating emissions reduction and adaptation policies. DDEP(3) said that IWGCC was not the first interdepartmental working group set up to coordinate the efforts of relevant departments to address the problem of climate change. Back in 1999 when studies were made on climate change, a similar working group had been set up under the leadership of a Deputy Secretary.

Study on climate change

41. Given that IWGCC would commission a study on climate change, Ms Emily LAU emphasized the need to ensure transparency in the appointment of consultants for the study. DDEP(3) said that the Administration was in the process of appointing consultants to conduct a study on climate change. This was not the first study on the subject as similar studies had already been completed in 2000 and 2004. Following the recent release of the findings of major international studies on climate changes, particularly those published by the Intergovernmental Panel on Climate Change, there was a need to conduct a comprehensive and up-to-date study to assess the likely impacts of climate change on Hong Kong. The study would provide a solid scientific basis for the Administration to formulate long-term measures for Hong Kong to reduce GHG emissions and adapt to climate change. It would also re-assess the GHG emissions in Hong Kong taking into account the latest statistics and methodologies. IWGCC would be tasked to co-ordinate and promote actions to address climate change and reduce GHG emissions. It would also be responsible for steering the consultancy study on climate change. Dr NG Cho-nam/ACE added that while Hong Kong had a high energy efficiency performance, a study on climate change was still required to assist in projecting the future trends in GHG emissions and to recommend additional policies and measures to reduce GHG emissions. The development of RE would also assist in reducing GHG emissions. Ms LAU held the view that the terms of reference of IWGCC should include a time table within which the emission reduction targets for GHG should be set such that the subject could be considered in the context of the consultancy study on climate change. DDEP(3) agreed to consider the suggestion put forward by members.

VII. Any other business

Proposed overseas duty visit to Singapore

(LC Paper No. CB(1) 647/07-08(20) — Paper on proposed overseas duty visit)

42. The Chairman drew members' attention to the paper on the proposed overseas duty visit to Singapore to learn the experience in controlling idling vehicles with running engines. The visit, if considered necessary by members, would take place in March 2008. As interested members could not spare time in March, Ms Emily LAU suggested that the visit should not be pursued. Members agreed.

43. There being no other business, the meeting ended at 4:30 pm.

Council Business Division 1
Legislative Council Secretariat
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