

**立法會**  
**Legislative Council**

LC Paper No. CB(1) 1146/00-01

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**LegCo Panel on Environmental Affairs**

**Minutes of meeting**  
**held on Tuesday, 6 February 2001, at 2:30 pm**  
**in Conference Room A of the Legislative Council Building**

**Members present** : Prof Hon NG Ching-fai (Chairman)  
Hon Cyd HO Sau-lan (Deputy Chairman)  
Ir Dr Hon Raymond HO Chung-tai, JP  
Hon Martin LEE Chu-ming, SC, JP  
Hon Eric LI Ka-cheung, JP  
Hon Bernard CHAN  
Hon Mrs Miriam LAU Kin-yee, JP  
Hon Emily LAU Wai-hing, JP  
Hon LAW Chi-kwong, JP  
Hon Abraham SHEK Lai-him, JP  
Hon Henry WU King-cheong, BBS  
Hon Tommy CHEUNG Yu-yan, JP  
Hon Albert CHAN Wai-yip  
Dr Hon LO Wing-lok  
Hon LAU Ping-cheung  
Hon Audrey EU Yuet-mee, SC, JP

**Members attending** : Hon IP Kwok-him, JP

**Members absent** : Hon WONG Yung-kan  
Hon CHOY So-yuk  
Hon Michael MAK Kwok-fung

**Public officers attending** : Mrs Lily YAM  
Secretary for the Environment and Food

Mr Rob LAW  
Director of Environmental Protection

Mr Kim SALKELD  
Deputy Secretary for the Environment and Food(B)

Mr Thomas CHOW  
Deputy Secretary for the Environment and Food(C)

Ms Annie CHOI  
Principal Assistant Secretary for the Environment and Food

Mr Donald TONG  
Principal Assistant Secretary for the Environment and Food

**Clerk in attendance** : Miss Odelia LEUNG, Chief Assistant Secretary (1)1

**Staff in attendance** : Mrs Mary TANG, Senior Assistant Secretary (1)2

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**I Confirmation of minutes of meeting**  
(LC Paper No CB(2)779/00-01)

The minutes of the special meeting on 1 November 2000 were confirmed.

**II Information paper issued since last meeting**

2. Members noted that no information paper had been issued since the last meeting.

**III Date of next meeting and items for discussion**

(LC Paper No. CB(1)521/00-01(01) - List of follow-up actions arising from discussion

LC Paper No. CB(1)521/00-01(02) - List of issues to be considered)

3. Members agreed to discuss the following items at the next meeting scheduled for Tuesday, 6 March 2001, at 2:30 pm -

- (a) 125DS- Tolo Harbour Sewerage of Unsewered Areas, Stage I - Members noted that the project would extend the sewage collection system to villages around the Tolo Harbour and would bring about improvements to the water quality in Tolo Harbour; and

- (b) Increase in approved project estimate for “301DS- East Kowloon Sewerage Improvements & Pollution Control” - Members noted that additional funding would be required to complete the project which would bring about improvements to the sewerage system in East Kowloon.

4. The Administration advised that both items would be submitted to the Public Works Subcommittee in April 2001. As for the subject on the way forward for harbour area sewage treatment systems, members noted that the Administration might not be ready to discuss the subject at the next meeting.

*(Post meeting note: The next Panel meeting was subsequently deferred to 19 March 2001 on the advice of the Chairman.)*

#### **IV Progress report on environmental protection**

(LC Paper No. CB(1)471/00-01)

5. Before proceeding to discuss the subject, the Chairman advised that since the measures to reduce the noise impact on existing roads and the control on idling engines would be discussed respectively at the joint meetings with the Transport Panel on 7 and 27 February 2001, questions on these two subjects need not be raised at this meeting.

6. The Secretary for the Environment and Food (SEF) said that the progress report was compiled in response to the Panel’s request and provided information on the progress made in the avoidance and mitigation of environmental pollution over the past decade. It outlined the actions, expenditures and results in five areas, namely, air pollution control, water quality improvement, waste management, noise control and energy efficiency. She advised that over the years, a lot of resources had been invested in air pollution control and some improvements in air quality were seen. With the implementation of a series of measures to improve air quality in the later part of 2000, there had been respective decreases of 8% and 6% in the average levels of respirable suspended particulates (RSP) and nitrogen oxides in 2000 as compared to the levels in 1999. As improvements would take time, the Administration would be targeting at a five-year plan for its improvement measures to take effect. She pointed out that the air quality was affected by weather conditions and sustained efforts were needed for improvements in air quality.

7. As regards water quality improvement, SEF said that the report had provided the progress made since 1989. In the next two years, the Administration would be committed to establishing the way forward in resolving the water pollution problem in the Victoria Harbour. In view of the controversy over the choice of harbour sewage treatment system, the Administration had appointed an International Review Panel (IRP) in April 2000 to advise the Government on the way forward for the development of the sewage system for the main urban area. The Administration was studying the

recommendations made by IRP and would be able to brief the Panel further in March 2001.

8. SEF further advised that the Administration was working on measures to address the inadequacies in separation and collection facilities for municipal wastes and would be finalizing its proposals on waste management in the next few months. She stressed that environmental protection was a complex issue which required support from the public. The Administration was aware of the need for public consultation and would explain its policies to the public and the affected trades before implementing its proposals. She was thankful for Members' support in the past year in the implementation of air quality improvement measures and hoped to have their continued support in other aspects of environmental protection.

#### Energy efficiency

9. Ir Dr Raymond HO enquired about the latest development of the energy end-use database. He opined that the scope and the timeframe of the database should be clearly defined to facilitate use by researchers. Referring to paragraph 5 on page 44 of the report, he enquired about how the improvement in total energy end-use consumption per dollar of Gross Domestic Product (GDP) from 0.34 to 0.31 megajoules was arrived at. He also enquired about the study on renewable energy and the amount of resources which the Administration expected to put in the development of renewable energy for the next five years. In response, the Deputy Secretary of the Environment and Food(B) (DSEF(B)) made the following points-

#### *Energy end-use database*

- (a) The objectives for developing energy end-use database were to provide information for Government planning and for researches undertaken by universities. The database would provide fine details as to energy consumption in different sectors, the types of equipment used, etc. It would be a very valuable tool for tracking the energy use patterns by the building and the engineering sectors. The Administration also intended to use the database in conjunction with other studies such as the study on greenhouse gases.

#### *Total energy end-use consumption*

- (b) Despite an improvement in the total energy end-use consumption per dollar of GDP, the overall demand for energy was increasing. The energy efficiency was calculated by dividing the total energy end-use consumption by GDP and this would provide a benchmark for comparison with other countries. The projections for 2010 were based on the assumptions on energy capacities using existing equipment. The projections did not make any assumptions about introducing new energy efficiency equipment.

*Renewable energy*

- (c) The purpose of the consultancy study on renewable energy was to evaluate the full scope for introducing renewable energy. The study consisted of two parts, one was evaluating the potential of renewable energy while the other was dealing with pilot projects on new equipment. The study was at its preparatory stage and an estimate on the expected resources to be put into renewable energy had yet to be made.

10. Mr Albert CHAN remarked that the market structure for the electricity supply sector in Hong Kong was an anomaly. He pointed out that while the China Light and Power Company had a surplus of generation facilities, the Hong Kong Electric Company did not have enough generation facilities and had to build additional ones at the expense of creating irreparable damage to the environment. Moreover, the provision of additional generation facilities would require vast amounts of land resources. He queried why the report had not addressed to the problem and no mention was made about interconnection between the two power companies. He said that as the Policy Bureau in charge of environmental protection, the Environment and Food Bureau (EFB) should ensure that more environmental friendly measures were adopted in the electricity supply sector.

11. SEF said that the Economic Services Bureau was responsible for the electricity supply sector in Hong Kong. Meanwhile, a consultancy study on the renewable energy was undertaken to identify more environmental friendly means of electricity supply. EFB would need to take account of the various factors associated with electricity supply and would try to implement more environmental measures in the delivery process. DSEF(B) added that the table provided in the report referred to the total energy consumption and not only to the energy provided by power companies. With the policy already in place, the pollution from per unit of energy generated was reducing very rapidly. Last year, the amount of sulphur dioxide and nitrogen dioxide emitted was less than half of the level in 1989. EFB intended to address the environmental impact by improving energy efficiency and reducing the pollution generated from power companies as well as from industrial and transport emissions.

Air pollution

*Air quality*

12. Expressing concern about the poor air quality in Hong Kong, Ms Emily LAU said that the Administration might need to expedite the five-year improvement plan. She said that given its huge financial reserve, the Administration should seriously consider investing on the more deserving causes such as environmental protection and education. Instead of relying on enforcement actions, consideration should be given to providing financial incentives to encourage the switch to the use of more environmental friendly vehicles with a view to attaining improvements in air quality within a shorter time frame. SEF said that the Administration was as keen as members in shortening the five-year improvement plan. However, some of the

improvement measures could not be expedited through the injection of extra funds. Such was the case of the provision of Liquefied Petroleum Gas (LPG) filling stations which was constrained by the availability of land and safety considerations. The Administration appreciated the support and co-operation of the transport trade. It had been more than a year since the implementation of the five-year plan and interim results were being evaluated. Given the complexity of some of the measures, it might not be possible at this stage to expedite the plan but the Administration would continue to keep in view its progress. Ms LAU said that she hoped that the Administration would actively consider expediting its improvement measures through the injection of funds as the public had become increasingly intolerant of the poor air quality.

*Air Pollution Index*

13. Mrs Miriam LAU noted that there had been apparent improvements in air quality as a result of a series of measures implemented over the past years. However, this was not reflected in the Air Pollution Index (API) which had been consistently on the high side for more than half of the year. She enquired about how the standard of air quality was arrived at and whether an objective should be set, for example, by setting the number of days that API should not exceed a certain level.

14. On air pollution control, SEF said that the Administration was most concerned about the impact of air pollution on public health. The two pollutants which would have adverse effect on health were RSP and nitrogen oxides. The measures implemented were aimed at reducing the levels of these two substances. There had been positive progress made over the past year and the Inter-departmental Task Force to Improve Air Quality would be assessing the improvements in air quality resulting from the implementation of improvement measures. Mrs LAU's suggestion of setting an objective for achieving a certain level of API for a number of days in a year would need to be further looked into.

15. The Director of Environmental Protection (DEP) added that it was common perception that API for days of low visibility would be assumed to have exceeded the acceptable level. He said that the Environmental Protection Department (EPD) monitored both the air quality at the general ambient stations and the roadside stations and compared the results with the Air Quality Objectives. If any of the Air Quality Objectives was exceeded, API would exceed 100. API was based on a complex and scientific calculation which was used commonly in the United States and many other countries. He added that the numbers of days in which the general and the roadside stations exceeded API were 2 and 11 respectively in the second half of 2000 while the numbers of days in which the general and the roadside stations exceeded API were 8 and 19 respectively in 1999. These figures might not be able to indicate that there was a significant improvement in air quality as weather played an important part in air pollution. If measured in terms of hours of the day in which API was exceeded, the roadside API was exceeded for 1.2% of the time or 112 hours in total for the second half of 2000 as compared to 3.2% of the time or 339 hours in 1999. This served to show that the perception of air pollution could sometimes be worse than scientific reality. There had been a general reduction in sulphur dioxides and nitrogen oxides

since various programmes had been put in place. About 5,000 taxis had been switched to the use of LPG and as the number of LPG taxis increased, there would be added improvements to the air monitoring results. The Deputy Secretary for the Environment and Food (C) (DSEF(C)) said that the public would have the general perception that API of between 51 to 100, which was described as on the high side, was unacceptable. In actual case, for the short-term, an API would only be unacceptable if it exceeded 100.

16. Mrs Miriam LAU opined that an API which was described as on the high side for most of the time would give the public and the world the general perception that Hong Kong was a polluted city. As an international city, Hong Kong should be given a fair assessment of its actual situation and the facts should be made known. There was thus a need to put the public in the right perspective, as otherwise all the efforts made in improving the air quality could not be perceived and recognised. SEF acknowledged Mrs LAU's concerns about the general perception on the quality based on API. She agreed that while there was a need to maintain a scientific method of assessing air quality, the choice of words in describing the actual situation as reflected by API might have to be reviewed. She would look into the matter and seek the views of the Panel in due course.

Admin.

#### *Vehicle fuel*

17. Mr LAW Chi-kwong was however of the view that an API on the high side should not be acceptable. He further pointed out that LPG might not be a desirable alternative to diesel as the RSP emitted from LPG vehicles, though not visible to the naked eye, would still be injurious to health. There was a need to take experience from overseas countries regarding the use of LPG as he was aware that some countries did not allow LPG vehicles in some of their carparks. He was therefore not fully confident that the use of LPG vehicles should be the way forward, in particular when more environmentally friendly vehicles such as Euro III and the newer models could be made available for use. SEF clarified in response that the Administration had all along supported the use of more environmental friendly vehicles. The provision of LPG filling stations for use by the 18,000 LPG taxis had already posed serious difficulty. On Mr LAW's concern about the emission of ultra-fine RSP from LPG vehicles, SEF advised that there was yet no conclusion on the health impact of LPG. The fact that the report was conducted by rival vehicle fuel companies made it essential for its findings to be seen in context. In deciding on the choice of fuel, various factors would need to be taken into account. These included cost-effectiveness, environmental friendliness, provision of supporting facilities, and the time frame for implementation. DSEF(C) added that the Administration had in fact been supportive of the use of electric vehicles long before the introduction of LPG taxis as electric vehicles which produced zero emission were more environmental friendly than LPG vehicles. The exemption of the first registration tax for electric vehicles had been introduced for quite sometime. He also informed members that the emission performance of LPG vehicles had been proven to be better than diesel vehicles of Euro III emission standard.

18. Mrs Miriam LAU commented that there was a need for the commissioning of research studies on the use of alternative vehicle fuels. If this could not be done by local universities, reference should be made to overseas experience to see this could be adapted. DEP said that the situation in Hong Kong was that it could not sustain large scale fundamental research because it did not have the motor vehicle manufacturing capabilities. The types of research on alternative fuels were sponsored by major vehicle or engine manufacturers. Nevertheless, the Administration would closely monitor the latest development elsewhere. He said that he and other staff of EPD had been travelling around to observe the research programmes, in particular, the fuel cell programme undertaken in Canada, Europe and California. The fuel cell was a potential alternative source of energy for motor vehicles and its use would result in zero emission. This would be a great hope for the future of Hong Kong. There were other alternative fuels such as natural gas and compressed gas. In the next five to 15 years, there would be a variety of alternatives which would find their way into the market. Mrs LAU said that the Administration should make known its stance on the use of alternative fuels. Referring to the case of canola oil, she said that the public would wish to know whether the oil was an acceptable fuel for use by vehicles. SEF said in response that the trial scheme on the use of bio-diesel would include canola oil. The Administration could not be in a position to advise the public until the studies were completed.

#### *Vehicle replacement and maintenance*

19. Referring to the bar charts at page 8 of the report, Mrs Miriam LAU noted that the performance of Euro III vehicles had surpassed pre Euro I, Euro I and Euro II vehicles in term of their new vehicle exhaust emission standard by a wide margin, as reflected in the much lower emission levels of hydrocarbons, nitrogen oxides and carbon monoxides. In this connection, she was of the view that the replacement of existing old vehicles with new Euro II or III vehicles would be a more effective way to improve emission performance than retrofitting existing vehicles with catalytic converters and filtering devices. She enquired about the measures that would be taken by the Administration in encouraging owners to trade in for new cars and the progress of work of the Working Group on Vehicle Maintenance Services. She opined that with the replacement of old vehicles with poor emission performance and the promotion of better vehicle maintenance, there should be further improvements in air quality.

20. SEF said that the replacement of existing vehicles with more environmental friendly modes of vehicles was being pursued by the Inter-departmental Task Force to Improve Air Quality. Apart from introducing financial incentives for replacement with new vehicles, consideration would also be given to introducing disincentives for using old vehicles with poor emission performance. As regards vehicle maintenance, DSEF(C) said that, to prepare the transport trade for the increase in fixed penalty on smoky vehicles from \$450 to \$1000 in December 2000, the Working Group on Vehicle Maintenance Services had made a lot of effort to assist the trade in providing better vehicle maintenance services, so that the vehicles would be able to meet the standard required. The Working Group would continue to explore with the trade on measures

to improve the maintenance standard. It would also look into the proposal of introducing a registration system for automobile mechanics.

21. Mrs Miriam LAU noted that the Working Group on Vehicle Maintenance Services was set up in January 2000 for the purpose of implementing the increase in fixed penalty on smoky vehicles. It appeared that the Working Group had not been actively engaged in its work after the increase had taken effect as it had only convened one meeting in September 2000 and had not met since. She enquired about the authority which should be held responsible for the matter. DSEF(C) confirmed in response that the Working Group was still in action, and that for the time being EFB and the Transport Bureau would continue to take charge of it.

*Joint study on regional air quality*

22. As regards Ms Emily LAU's enquiry on the progress of the joint study carried out by the Hong Kong Special Administrative Region and the Guangdong Provincial Government on the regional air quality, SEF advised that the gathering of data was expected to be completed in early 2001. A few months would be needed to analyse the data and to work out possible solutions. On completion of the study, there would be more information available to assist the Administration in assessing the impact of regional air pollution on Hong Kong's air quality and in mapping out practicable improvement measures. Ms Cyd HO enquired whether the Joint Working Group would be submitting its report to the Legislative Council and what action would be taken if the two sides failed to reach consensus on the implementation of environmental measures. SEF said that the purpose of setting up the Joint Working Group was to seek co-operation and to co-ordinate the environmental enforcement measures implemented by both sides based on their own environmental legislation. The Joint Working Group agreed to meet twice a year. A report on the work of the Joint Working Group could be provided for members' reference. As regards Ms HO's further enquiry on the members' earlier proposal of setting up a filling station for low sulphur diesel at the border, SEF said that the subject was under study by the Inter-departmental Task Force to Improve Air Quality. It would be assessing the practicability and cost effectiveness of the proposal and its impact on the trade.

Waste management

23. Mr Tommy CHEUNG said that the Administration had not provided in its report information on the percentage recovery rate of waste nor the target which it intended to achieve in waste recovery. He was particularly concerned about the recycling of used oil from the food industry. SEF said that the Administration intended to provide a more detailed report on waste recovery and segregation in a few months' time. DSEF(B) referred members to page 30 of the report which set out the overall figures for waste recovery. He said that the recovery rate for the domestic sector was much lower than that for the commerce and industry sector. Priority would be given to increasing the segregation facilities in residential areas to improve the waste recovery rate. As set out in the Waste Reduction Framework Plan, the objective was to reduce by half the volume of waste that were going to the landfills by

2007. Part of the waste reduction plan would be met by bulk waste treatment, while the other part would be met by separation and recycling of waste. Since there had been some delay in the planning for bulk waste treatment facilities, there was a need to increase the rate of waste recycling, in particular of construction and demolition waste. The number of separation bins was increased in public places and housing estates for the segregation of waste. The Administration would be putting forward proposals for more extensive measures for supporting facilities in the recycling of waste in the next few months. DEP supplemented that it was public perception that Hong Kong was not keen on waste recycling but in fact the overall recovery rate in Hong Kong was 35 % and this was the same as in Australia, the United Kingdom and the United States. It also had a very high recovery rate for aluminium cans.

24. On grease trap waste, DSEF(B) said that this was a category of specialised waste and the Administration was looking at arrangements to treat this type of waste. Presently, grease trap waste was required to go through a stabilization process before it was dumped in landfills. The Administration would be supportive of measures proposed which would recycle such waste into useful materials. Mr CHEUNG said that there were no incentives provided to the food and beverage industries in the recycling of waste. He further pointed out that as the used oil from the restaurants could be processed into bio-diesel, the Administration should provide assistance to the trade in the setting up of the oil recycling business. SEF said that the Administration would consider the need for encouraging the use of bio-diesel after a trial scheme on its benefits was completed in mid-2001.

#### *Radioactive waste*

25. On the Chairman's enquiry on the control of radioactive waste, DEP said this was under the purview of the Director of Medical and Health. The role of EPD was to look at alternative means for handling the disposal of the waste and the subject was under active consideration. Over the past years, there had been a considerable reduction in the generation of low level radioactive waste.

#### Water quality improvement

##### *Livestock waste control*

26. On Mr Albert CHAN's concern about odour problem of livestock waste and the need to introduce measures to control its illegal discharge, DSEF(B) said that the amount of pollution into water courses from livestock waste had reduced dramatically. The odour problem arising from livestock had been a cause for complaint by some District Councils. However, as far as pollution control was concerned, there was little that could be done if the livestock farms were abiding by the Water Pollution Control Ordinance (Cap. 358). The Administration would try to address the odour problem through better planning control. More would need to be done to improve the water quality to meet public expectations in enclosed areas around Deep Bay, Tolo Harbour and beaches. DEP said that there were unscrupulous livestock keepers who would discharge their effluents illegally at night. This would cause pollution and

odour problems. Staff of EPD engaged in night time operations was experiencing difficulties in catching the keepers red-handed as they had various means to detect the presence of EPD staff in the vicinity of the farms.

Noise control

27. Referring to page 40 of the report which indicated that fewer than 300 people were exposed to relatively high aircraft noise since the airport relocation, Mr Albert CHAN said that the information given had been misleading as he was aware that tens of thousands of people were affected by aircraft noise. He was also concerned about the violation of permit conditions by construction contractors who worked at night as well as the need for noise insulation facilities for schools. DSEF(C) said that based on the noise tolerance level provided by the Civil Aviation Department, there were fewer than 300 people who were affected by high aircraft noise. More information on the noise impact on other residents under the flight path could be made available if members so wished. DEF added that the 300 people were those who were exposed to levels above NAF25 which was the international standard used for planning purposes. As regards members' concern about construction noise, DEP advised that EPD would not issue construction permits for work at night in urban areas unless for emergency purposes.

Environmental education

28. Ms Cyd HO commented that while the report had gone into details about enforcement actions and administrative measures, no reference had been made on environmental education which was a very important aspect. SEF said that the Administration, the Environmental Campaign Committee and the green groups had put in a lot of effort in educating the public on environmental protection. She agreed with Ms HO on the need for emphasis on education and participation.

29. While appreciating the Government's efforts in promoting participation, Mr Martin LEE said that students should be encouraged to participate in cleaning campaigns and a day set aside for this purpose could be considered. They should also adopt more environmental practices such as the use of handkerchiefs. In this way, students would bring home the needed awareness on environmental protection. SEF noted Mr LEE's suggestion but considered that there might not be a need to grant a holiday for students to participate in any Clean Hong Kong programme.

*Government as leader in environmental practices*

30. In response to Mr Henry WU, SEF said that the Government had all along taken the lead in adopting environmental practices. When the low sulphur diesel was first introduced, the Government took the lead in the use of the diesel for its fleet. In the past few years, Government departments were requested to provide progress report on the environmental measures adopted. These reports would be assessed by EFB. EFB was also keen on promoting of green procurement. Mr WU stressed the need for the Administration to put more concerted efforts in waste recovery and recycling.

Mr Martin LEE asked whether the Administration would consider the shared use of Government vehicles by Government officials. SEF said that the use of Government vehicles was on a need basis and the pooling of transport for Bureaux Directors would pose operational problems.

*Green buildings*

31. Mr LAU Ping-cheung commended the Administration for its efforts in improving the environment. For short-term improvements to air quality, he suggested the installation of large scale air purifiers. As for longer-term improvement, he said that this would have to rely on better city planning and the development of buildings with more environmental friendly designs. Presently, land development had been constrained by height restrictions and plot ratios and more financial incentives should be given to the development of environmental friendly features which would improve energy efficiency and air circulation. He also pointed out that the choice of building materials would impact on the energy efficiency of buildings while the use of more environmental friendly pre-fabricated components would reduce the amount of construction waste produced.

32. SEF thanked Mr LAU for his suggestions. She said that although some of his suggestions did not fall within the purview of EFB, these were all related to the improvement of the living environment. She agreed on the need for long-term planning to improve the living environment and would continue to work together with the Planning and Lands Bureau, the Planning Department and the Buildings Department in the promotion of green buildings. The opportunity had been taken to improve environmental awareness in building construction by the Construction Industry Review Committee which had completed its review.

**III Any other business**

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