

**立法會**  
**Legislative Council**

LC Paper No. CB(1) 2074/11-12  
(These minutes have been seen  
by the Administration)

Ref : CB1/PS/3/08/1

**Panel on Environmental Affairs**

**Subcommittee on Improving Air Quality**

**Minutes of meeting**  
**held on Monday, 16 April 2012, at 10:45 am**  
**in Conference Room 3 of the Legislative Council Complex**

**Members present** : Hon Audrey EU Yuet-mee, SC, JP (Chairman)  
Hon Miriam LAU Kin-ye, GBS, JP  
Hon LEE Wing-tat  
Hon KAM Nai-wai, MH  
Hon Cyd HO Sau-lan  
Hon CHAN Hak-kan  
Hon CHAN Kin-por, JP  
Hon Tanya CHAN

**Member attending** : Prof Hon Patrick LAU Sau-shing, SBS, JP

**Public officers attending** : **For item II**

Ms Anissa WONG  
Permanent Secretary for the Environment/Director of  
Environmental Protection

Mr Andrew LAI  
Deputy Director of Environmental Protection (3)

Mr MOK Wai-chuen  
Assistant Director (Air Policy)  
Environmental Protection Department

Mr PANG Sik-wing  
Principal Environmental Protection Officer (Air Policy)  
Environmental Protection Department

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

**Staff in attendance** : Miss Jacqueline CHUNG  
Council Secretary (1)1

---

**I. Confirmation of minutes**

(LC Paper No. CB(1) 1531/11-12 — Minutes of the meeting held on 21 February 2012)

The minutes of the meeting held on 21 February 2012 were confirmed.

**II. Review of Air Quality Objectives**

(LC Paper No. CB(1) 1532/11-12(01) — Administration's paper on update of Air Quality Objectives)

Relevant paper

*(issued by the Environment Bureau/Environmental Protection Department in January 2012)* — Legislative Council Brief on update of Air Quality Objectives)

2. The Subcommittee deliberated (Index of proceedings attached in **Annex**).

3. The Administration was requested to -

(a) advise the feasibility of updating the Air Pollution Index (API) based on the proposed Air Quality Objectives (AQOs) before formal promulgation of the latter in 2014. To consider increasing the number of air quality monitoring stations from 11 to 18 using the 18 Districts as the basis. Instead of a regular review in every five years, consideration should be given to reviewing AQOs more often (say every two years) or conducting a mid-term review during the interim to take account of the changes in Hong Kong and the Pearl River Delta Region (PRD). To also advise the manner in which the review will be conducted;

(b) elaborate the proposed AQO for fine suspended particulates (PM<sub>2.5</sub>) and its effects, particularly on the transport trades, if this is included in API. To also advise the existing monitoring results on PM<sub>2.5</sub>;

- (c) set out in tabular form the average service life and estimated average age, sale prices, as well as licence fee of the pre-Euro, Euro I and Euro II diesel commercial vehicles still running on the road. To also advise the amount of remaining subsidy from the two incentive schemes to encourage early replacement of pre-Euro, Euro I and Euro II commercial diesel vehicles;
- (d) provide a paper setting out the measures being contemplated by the Administration to substantially reduce the number of pre-Euro, Euro I and Euro II commercial diesel vehicles in Hong Kong. If increase in licence fee was one of the possible options, please advise the anticipated levels of licence fee which could achieve a deterrent effect. To also include in the paper the feasibility of buying out these polluting vehicles;
- (e) advise the progress of the setting up of low emission zones (LEZ), including the number of low-emission buses deployed to routes serving the pilot LEZ and the capability of franchised bus companies to meet the demand;
- (f) advise if assistance would be provided to enable the continuation of the Fair Winds Charter which was expected to end on 31 December 2012. To also advise the progress of controlling emissions of ocean-going vessels at berth within PRD, particularly the discussion between Hong Kong and the relevant authorities in the Mainland; and
- (g) provide a report on the discussion between the Administration and the Guangdong Provincial Government on the post-2010 arrangements for emission reduction in the PRD Region, including the names of the representatives from Hong Kong, the number of meetings held and the initial ideas on the post-2010 emission reduction targets.

4. Members agreed that the next meeting would be held on Wednesday, 27 June 2012, at 8:30 am to discuss the following -

- (a) Review of Air Quality Objectives; and
- (b) Trial on retrofitting of selective catalytic reduction device for franchised bus fleet.

**III. Any other business**

5. There being no other business, the meeting ended at 12:25 pm.

Council Business Division 1  
Legislative Council Secretariat  
1 June 2012

## Panel on Environmental Affairs

## Subcommittee on Improving Air Quality

**Proceedings of the meeting  
on Monday, 16 April 2012, at 10:45 am  
in Conference Room 3 of the Legislative Council Complex**

Time marker	Speaker	Subject(s)	Action required
<i>Agenda Item I - Confirmation of minutes</i>			
000514 - 000610	Chairman	The minutes of the meeting held on 21 February 2012 (LC Paper No. CB(1) 1531/11-12) were confirmed.	
<i>Agenda Item II - Review of Air Quality Objectives</i>			
000611 - 001051	Chairman Administration	Administration's brief introduction on the proposed new Air Quality Objectives (AQOs) and air quality improvement measures for achieving the new AQOs (LC Paper No. CB(1) 1532/11-12(01)).	
001052 - 001803	Mr KAM Nai-wai Administration Chairman	<p>Mr KAM Nai-wai's concerns/ enquires -</p> <p>(a) the proposed new AQOs lagged way behind the Air Quality Guidelines (AQGs) of the World Health Organization (WHO). Besides, the lead time for updating AQOs was too long which would only take effect in 2014, let alone the transitional period of 36 months from the commencement date of the new AQOs;</p> <p>(b) instead of a regular review in every five years, consideration should be given to reviewing AQOs more often (say every two years); and</p> <p>(c) whether the Air Pollution Index (API) could be updated using the proposed AQOs before formal promulgation of the latter in 2014.</p> <p>Administration's response -</p> <p>(a) the long-term goal was to achieve the WHO AQGs. To deliver this target progressively, a review</p>	<p>The Administration -</p> <p>(a) to advise the feasibility of updating the Air Pollution Index (API) based on the proposed AQOs before formal promulgation of the latter in 2014; and</p> <p>(b) instead of a regular review in every five years, consideration should be given to reviewing AQOs more often (say every two years).</p>

Time marker	Speaker	Subject(s)	Action required
		<p>mechanism would be put in place to regularly ascertain the extent to which the new AQOs had been achieved, the progress of the air management strategy, as well as the need and practicality of further tightening AQOs. The frequency of the review should be no less than every five years to allow reasonable time to assess the impacts of the earlier improvement measures on air quality taking into account the prevailing social, economic and technological development;</p> <p>(b) on top of the 19 air quality improvement measures recommended under the AQO Review, other measures had been and would be identified to improve air quality. In updating AQOs, the Administration would also review API to better communicate air quality information to the public. It was not desirable to report API based upon the proposed new AQOs, which had not yet become statutory;</p> <p>(c) the proposed schedule for updating AQOs was considered appropriate taking into account the lead time for completing the legislative process and other necessary preparatory works; and</p> <p>(d) APIs were worked out according to the prevailing statutory AQOs. Adoption of the proposed AQOs before these were promulgated would involve a fundamental change in the current API system.</p>	
001804 - 002505	Mr CHAN Kin-por Administration Chairman	<p>Mr CHAN Kin-por's views -</p> <p>(a) in view of the large number of pre-Euro and Euro I diesel commercial vehicles still running on the road, there was a need to work out other measures to substantially reduce the number of</p>	<p>The Administration to -</p> <p>(a) provide a paper setting out the measures being contemplated to substantially</p>

Time marker	Speaker	Subject(s)	Action required
		<p>these polluting vehicles. Consideration should be given to using the remaining funds from the two incentive schemes to encourage early retirement of aged/heavily polluting vehicles for this purpose; and</p> <p>(b) as incentive schemes had proved to be ineffective in encouraging early retirement of more polluting vehicles, suitable punitive measures (such as increasing the licence fees) might need to be introduced. The Administration should also seriously re-consider buying out these polluting vehicles with a view to removing them from the road permanently.</p> <p>Administration's response -</p> <p>(a) about 30% of all eligible vehicles had been replaced under the subsidy scheme to encourage the early replacement of pre-Euro and Euro I diesel commercial vehicles, which ended in March 2010. Together with those vehicles which were replaced without joining the scheme or deregistered after expiry of the scheme, the total number of these vehicles had been reduced by about 48% as at December 2011;</p> <p>(b) under the subsidy scheme for Euro II diesel commercial vehicles launched in July 2010, about 10% of all eligible vehicles had been replaced as at end January 2012;</p> <p>(c) the proposed increase of licence fees for aged commercial vehicles was discussed at the Panel on Environmental Affairs (the Panel) and the Subcommittee in November 2008 and March 2010 respectively, but member did not support the proposal; and</p> <p>(d) the proposal of buying out polluting vehicles using public</p>	<p>reduce the number of pre-Euro, Euro I and Euro II commercial diesel vehicles in Hong Kong; and</p> <p>(b) include in the paper the feasibility of buying out these polluting vehicles.</p>

Time marker	Speaker	Subject(s)	Action required
		<p>funds might not be appropriate, particularly for those vehicle owners who did not wish to continue with their businesses. Besides, some owners might not use the subsidy to buy replacement with better emission performance.</p>	
002506 - 003247	Mr CHAN Hak-kan Administration Chairman	<p>Mr CHAN Hak-kan's views/enquiries -</p> <p>(a) the rationale for adopting different Interim Targets (ITs) of WHO AQGs as the proposed AQOs;</p> <p>(b) efforts should be made to expedite the legislative process for early implementation of the proposed AQOs; and</p> <p>(c) whether consideration could be given to increasing the number of air quality monitoring stations from 11 to 18 using the 18 Districts as the basis in order to provide more comprehensive information on air quality.</p> <p>Chairman's enquiry on the difficulties in providing additional air quality monitoring stations.</p> <p>Administration's response -</p> <p>(a) while WHO AQGs were released for global application for protection of public health, WHO accepted the need for governments to set national standards according to their own particular circumstances. To facilitate a progressive approach for achieving the ultimate AQGs, the WHO guidelines had suggested ITs for certain pollutants. So far, no countries were able to adopt the ultimate AQGs in entirety as their legal standards;</p> <p>(b) the proposed AQOs for Hong Kong were derived taking into account WHO's guidelines and practices in other advanced countries. WHO</p>	<p>The Administration to consider increasing the number of air quality monitoring stations from 11 to 18 using the 18 Districts as the basis.</p>



Time marker	Speaker	Subject(s)	Action required
		<p>IT-1 was adopted for fine suspended particulates (PM2.5) and ozone because their levels in Hong Kong were subject to strong regional influence;</p> <p>(c) the Environmental Protection Department (EPD) operated a network of 14 air quality monitoring stations for measuring concentrations of major air pollutants, including 11 general stations for monitoring ambient air quality and three roadside stations for measuring street level air quality. The existing network should be able to reflect the air quality in Hong Kong because areas of similar land uses and development density had similar air quality; and</p> <p>(d) at the moment, the Administration had no plan to expand the existing network because there were objectives guiding the establishment of new monitoring stations. The current network was representative.</p>	
003248 - 003704	Mr LEE Wing-tat Administration	<p>Mr LEE Wing-tat's views -</p> <p>(a) the Panel and the Subcommittee did not support the proposal to raise the licence fees for aged commercial vehicles because members considered that incentives should be used as far as practicable to encourage early replacement of polluting vehicles before punitive measures were introduced; and</p> <p>(b) the Administration should seriously consider buying out aged commercial vehicles with a view to removing them from the road permanently. The feasibility of mandating the retirement of old commercial vehicles was also worth studying.</p>	

Time marker	Speaker	Subject(s)	Action required
		Administration's response that it would look into the feasibility of different options to reduce the number of aged polluting vehicles taking into account the acceptability of the community.	
003705 - 004216	Miss Tanya CHAN Administration	<p>Miss Tanya CHAN's view/enquiry -</p> <p>(a) support for suitable punitive measures if incentive schemes to encourage early replacement of aged vehicles were proved to be not effective; and</p> <p>(b) the manner in which the review would be conducted. Instead of a regular review in every five years, consideration should be given to conducting a mid-term review during the interim to take account of the latest changes in Hong Kong and the Pearl River Delta (PRD) Region.</p> <p>Administration's response -</p> <p>(a) review of AQOs was a complex process. The frequency of the review of no less than every five years was considered appropriate to allow reasonable time to assess the impacts of the earlier improvement measures on air quality taking into account the prevailing social, economic and technological development; and</p> <p>(b) regional efforts were being made in monitoring and improving the air quality in the PRD Region.</p>	<p>The Administration to -</p> <p>(a) advise the manner in which the review would be conducted; and</p> <p>(b) consider conducting a mid-term review during the interim to take account of the changes in Hong Kong and the Pearl River Delta (PRD) Region.</p>
004217 - 005808	Ms Miriam LAU Administration Chairman	<p>Ms Miriam LAU's views/enquires -</p> <p>(a) support for the proposed new AQOs and necessary improvement measures to achieve the new standards. To reduce vehicular emissions, consideration should be given to buying out heavily polluting commercial vehicles and providing tax rebate to encourage replacement of aged private cars;</p>	<p>The Administration to -</p> <p>(a) advise if assistance would be provided to enable the continuation of the Fair Winds Charter which was expected to</p>

Time marker	Speaker	Subject(s)	Action required
		<p>(b) assistance should be provided to facilitate the transport trade to meet the proposed standard for PM2.5;</p> <p>(c) timetable for the Mainland to tighten the vehicle emission standards in line with international standards;</p> <p>(d) the progress of controlling emissions of OGVs at berth within PRD, particularly the discussion between Hong Kong and the relevant authorities in the Mainland; and</p> <p>(e) the Fair Winds Charter (the Charter) to encourage OGVs to voluntarily switch to use cleaner fuel while at berth in Hong Kong was expected to end on 31 December 2012. Whether the Administration would consider providing assistance to enable the continuation of the Charter.</p> <p>Chairman's request for a report on the discussion between the Administration and the Guangdong Provincial Government on the post-2010 arrangements for emission reduction in the PRD Region, including the names of the representatives from Hong Kong, the number of meetings held and the initial ideas on the post-2010 emission reduction targets.</p> <p>Administration's response -</p> <p>(a) there were primary and secondary emission sources of PM2.5, the former mainly from power plants and vehicles while the latter involving further chemical reactions of primary air pollutants such as nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) after their emission into the ambient environment;</p>	<p>end on 31 December 2012;</p> <p>(b) advise the progress of controlling emissions of ocean-going vessels (OGVs) at berth within PRD, particularly the discussion between Hong Kong and the relevant authorities in the Mainland; and</p> <p>(c) provide a report on the discussion between the Administration and the Guangdong Provincial Government on the post-2010 arrangements for emission reduction in the PRD Region, including the names of the representatives from Hong Kong, the number of meetings held and the initial ideas on the post-2010 emission reduction targets.</p>

Time marker	Speaker	Subject(s)	Action required
		<p>(b) measures (including the switch from diesel to LPG taxi and minibus, tightening of vehicle emission standards, retrofitting pre-Euro vehicles with particulate removal devices, upgrading emission standards for new vehicles, imposing emission caps on power plants, etc.) were effective in reducing our emissions of respirable suspended particulates (PM10) and PM2.5. However, retrofitting in-use vehicles with PM2.5 reduction devices might not be a practicable option to further improve the ambient PM2.5 level;</p> <p>(c) the Mainland was committed to controlling vehicular emissions. Starting from July 2011, all newly registered petrol vehicles had to comply with National IV emission standard (equivalent to Euro IV standard) nationwide, National IV standards would be adopted, starting from July 2013. However, there was no concrete timetable for the adoption of National V emission standard;</p> <p>(d) to encourage OGVs to switch to cleaner fuels when berthing in Hong Kong waters, the Financial Secretary announced in the 2012-13 Budget to reduce by half the port facilities and light dues charged on ocean-going vessels which switched to low-sulphur diesel at berth. The Administration was also exploring with the relevant authorities in PRD Region the feasibility of requiring OGVs to switch to low-sulphur fuel while berthing at ports of Hong Kong and PRD; and</p> <p>(e) the Administration and the Guangdong Provincial Government were conducting the final assessment on the delivery of the 2010 emission reduction</p>	

Time marker	Speaker	Subject(s)	Action required
		<p>targets. The two sides were also actively undertaking a study on the post-2010 arrangements for emission reduction in the PRD Region, which was expected to be completed within 2012.</p>	
005809 - 011020	Chairman Administration	<p>Chairman's views/enquiries -</p> <ul style="list-style-type: none"> <li>(a) the proposals to increase licence fee and buy out aged polluting vehicles were worth re-considering;</li> <li>(b) the amount of remaining subsidy from the two incentives schemes to encourage early replacement of pre-Euro, Euro I and Euro II commercial diesel vehicles;</li> <li>(c) the existing licence fees for pre-Euro, Euro I and Euro II diesel commercial vehicles; and the anticipated levels of licence fee to achieve a deterrent effect if increase in licence fee was one of the possible options; and</li> <li>(d) elaboration on the proposed AQO for PM2.5 and its effects (particularly on the transport trades), and the existing monitoring results on PM2.5.</li> </ul> <p>Administration's response -</p> <ul style="list-style-type: none"> <li>(a) proactive measures had been taken to reduce vehicular emissions which were a major source of PM2.5. These included introduction of LPG vehicles to replace diesel taxis and light buses, retrofit of particulate reduction devices and diesel catalytic converters on pre-Euro diesel vehicles trial on retrofitting of selective catalytic reduction (SCR) device for franchised bus fleets, tightening of emission standards of newly registered vehicles, etc.; and</li> </ul>	<p>The Administration to -</p> <ul style="list-style-type: none"> <li>(a) advise the amount of remaining subsidy from the two incentives schemes to encourage early replacement of pre-Euro, Euro I and Euro II commercial diesel vehicles;</li> <li>(b) if increase in licence fee was one of the possible options, advise the anticipated levels of licence fee which could achieve a deterrent effect;</li> <li>(c) elaborate the proposed AQO for PM2.5 and its effects, particularly on the transport trades; and</li> <li>(d) advise the existing monitoring results on PM2.5.</li> </ul>

Time marker	Speaker	Subject(s)	Action required
		<p>(b) EPD had been measuring PM2.5. As compared with 1999, the concentration of roadside PM2.5 as measured by the Central roadside station in 2010 had been reduced by about 30%. In 2010, the annual average concentration of PM2.5 at the Central station was 36 ug/m<sup>3</sup>, which was close to the proposed AQO of 35 ug/m<sup>3</sup> for PM2.5.</p>	
011021 - 011735	Miss Tanya CHAN Administration	<p>Miss Tanya CHAN's enquiries on the estimated number of designated projects which might need to adopt the proposed new AQOs before their formal promulgation in 2014 for conducting air quality impact assessment under the environmental impact assessment (EIA) process; and the consequences of non-compliance with the proposed AQOs.</p> <p>Administration's response -</p> <p>(a) projects that were likely to have a significant impact on the environment were classified as designated projects under the Environmental Impact Assessment Ordinance (Cap. 499) and were subject to the statutory EIA process;</p> <p>(b) the prevailing statutory AQOs would be adopted for the air quality impact assessment under EIA and in the application process for specified process licences under the Air Pollution Control Ordinance (Cap. 311) (APCO);</p> <p>(c) the introduction of the new AQOs might have impact on designated projects already granted with an environmental permit (EP) before the new AQOs came into operation. To preserve the integrity of the EIA system as an ongoing mechanism, as well as the regulatory certainty for proponents of projects that had already</p>	

Time marker	Speaker	Subject(s)	Action required
		<p>completed the EIA process, a time-limited transitional period of 36 months from the commencement date of the new AQOs would be provided, within which the new AQOs would not apply to an application for variation of an EP;</p> <p>(d) to underscore the Administration's commitment to adopting the best practices and to provide greater certainty to works departments in planning new development projects, all Government projects for which EIA studies had not yet commenced would endeavour to adopt the proposed new AQOs for conducting the air quality impact assessment under the EIA studies; and</p> <p>(e) proponents of designated projects were required to comply with the conditions on EP and implement mitigation measures set out in the approved EIA report.</p>	
011736 - 012524	Ms Cyd HO Administration	<p>Ms Cyd HO's enquiry on details of the amendments to APCO, and associated measures to be taken by the Administration with a view to achieving the proposed new AQOs before their formal promulgation in 2014.</p> <p>Administration's response -</p> <p>(a) APCO would need to be amended to give effect to the proposed new AQOs, and provide for a transitional period of 36-months within which the new AQOs should not apply to projects with EPs issued before the coming into operation of the new AQOs; and</p> <p>(b) other legislative amendments to existing ordinances might also be necessary to implement some of the air quality improvement measures. For example, APCO</p>	

Time marker	Speaker	Subject(s)	Action required
		<p>had been amended to stipulate statutory emission caps for the power sector from 2010 onwards via a Technical Memorandum (TM). The latest TM would take effect from 2015. To comply with the tightened emission caps, the power sector would have to increase the ratio of natural gas in local electricity generation to about 50%.</p>	
012525 - 012739	Mr CHAN Kin-por Chairman	<p>Mr CHAN Kin-por's view/enquiry -</p> <p>(a) the average service life and estimated average age of the pre-Euro, Euro I and Euro II diesel commercial still running on the road; and</p> <p>(b) there was an imminent need to remove pre-Euro and Euro I diesel commercial vehicles (which were the major source of roadside pollution) from the road permanently. Apart from new replacement vehicles, the two incentive schemes to encourage early replacement of aged vehicles should allow owners to buy second-hand vehicles with a higher emission standard.</p> <p>Chairman's request for the Administration to set out in tabular form the average service life and estimated average age, sale prices, as well as licence fee of the pre-Euro, Euro I and Euro II diesel commercial vehicles still running on the road.</p>	<p>The Administration to set out in tabular form the average service life and estimated average age, sale prices, as well as licence fee of the pre-Euro, Euro I and Euro II diesel commercial vehicles still running on the road.</p>
012740 - 013452	Chairman Administration	<p>Chairman's enquiries -</p> <p>(a) the progress of the setting up of low emission zones (LEZ), including the number of low-emission buses deployed to routes serving the pilot LEZ and the capability of franchised bus companies to meet the demand; and</p>	<p>The Administration to advise the progress of the setting up of low emission zones (LEZ), including the number of low-emission buses deployed to routes serving the pilot LEZ and the capability of</p>



Time marker	Speaker	Subject(s)	Action required
		<p>(b) actions taken by the power companies to meet the new emission caps.</p> <p>Administration's response -</p> <p>(a) the plan was that by 2015, only low-emission buses (those meeting the emission level of a Euro IV or above bus) would be deployed to routes serving LEZ. By then, the franchised bus fleet would have about 2 200 buses of Euro IV standards or above while about 2 500 of such buses would be required to meet the pilot LEZ target;</p> <p>(b) if the trial to retrofit Euro II and III buses with SCR devices was proved to be effective in reducing their emissions of NO<sub>x</sub> including NO<sub>2</sub> to Euro IV or above level, the retrofit would help ensure sufficient number of low-emission buses for the pilot LEZs. Details of the initial trial findings would be reported to the Subcommittee at the next meeting; and</p> <p>(c) the power companies would maximize the use of its gas-fired generation units and prioritize the use of coal-fired generation units equipped with advanced emission control devices for electricity generation so as to meet the emission caps.</p>	<p>franchised bus companies to meet the demand.</p>
013453 - 013928	Prof Patrick LAU Chairman Administration	<p>Prof Patrick LAU's enquiry on the availability of penalty provisions in the proposed amendments to APCO and other relevant legislation for non-compliance with the proposed new AQOs.</p> <p>Administration's response that amendments to APCO aimed to give effect to the proposed new AQOs, and to provide a transitional period of 36-months. There was also a need to amend other relevant legislation to</p>	

<b>Time marker</b>	<b>Speaker</b>	<b>Subject(s)</b>	<b>Action required</b>
		facilitate implementation of different air quality improvement measures if necessary. For example, the Buildings Energy Efficiency Ordinance (Cap. 610) was enacted to mandate the implementation of the Building Energy Code.	

Council Business Division 1  
Legislative Council Secretariat  
1 June 2012