

立法會
Legislative Council

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Panel on Environmental Affairs

Subcommittee on Improving Air Quality

Minutes of meeting
held on Wednesday, 27 June 2012, at 8:30 am
in Conference Room 3 of the Legislative Council Complex

Members present : Hon Audrey EU Yuet-mee, SC, JP (Chairman)
Hon LEE Wing-tat
Hon KAM Nai-wai, MH
Hon CHAN Hak-kan
Hon CHAN Kin-por, JP
Hon Tanya CHAN

Members absent : Hon Miriam LAU Kin-yee, GBS, JP
Hon Cyd HO Sau-lan

Public officers attending : **For item II**

Dr Kitty POON
Under Secretary for the Environment

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

Mr Edmond HO
Principal Environmental Protection Officer (Mobile
Source Control)
Environmental Protection Department

For item III

Dr Kitty POON
Under Secretary for the Environment

Mr Andrew LAI
Deputy Director of Environmental Protection (3)

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

Mr Edmond HO
Principal Environmental Protection Officer (Mobile
Source Control)
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 and endorsement of the draft report of the Subcommittee

(LC Paper No. CB(1) 2074/11-12 — Minutes of the meeting held
on 16 April 2012
LC Paper No. CB(1) 2198/11-12 — Draft report of the
Subcommittee)

The minutes of the meeting held on 16 April 2012 were confirmed.

2. Members endorsed the draft report of the Subcommittee on Improving Air Quality for the current session, and authorized the Clerk to revise the report to cover discussion at the current meeting before it was presented to the Panel.

II. **Review of Air Quality Objectives**

(LC Paper No. CB(1) 2200/11-12(01) — List of follow-up actions arising from the discussion at the meeting on 16 April 2012

LC Paper No. CB(1) 2200/11-12(02) — Administration's response to CB(1) 2200/11-12(01))

Relevant papers

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

LC Paper No. CB(1) 1532/11-12(01) — Administration's paper on update of Air Quality Objectives
(*issued for the meeting on 16 April 2012*)

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

4. The Administration was requested to -

- (a) provide a paper summarizing the achievements made in the past five years in improving the air quality of Hong Kong;
- (b) provide a paper setting out the latest development of the post-2010 arrangements for emission reduction in the Pearl River Delta Region;
- (c) provide the monitoring results of respirable suspended particulates (PM10) and fine suspended particulates (PM2.5) for the period from 1999 to 2011. To also advise how these monitoring results could translate to the proposed new Air Quality Objectives for PM10 and PM2.5;
- (d) advise the number of existing pre-Euro, Euro I and Euro II diesel commercial vehicles in Hong Kong, and the number of these vehicles which had been replaced under the two incentive schemes. To also advise the difficulties in putting forward disincentives (such as increasing the licence fees and frequency of annual inspection) to deter continued use of these vehicles; and
- (e) advise the impact of the setting up of low emission zones on other districts since the ratio of low-emission franchised buses running in the latter districts would be reduced.

III. Interim findings on the trial of retrofitting franchised buses with selective catalytic reduction devices

(LC Paper No. CB(1) 2200/11-12(03) — Administration's paper on interim findings on the trial of retrofitting franchised buses with selective catalytic reduction device)

5. The Administration was requested to -

- (a) advise the cost of the trial, the bus routes being serviced by the buses on trial, the anticipated funding in the event of a full-scale retrofit of the selective catalytic reduction (SCR) devices, and the parties (the Administration or the franchised bus companies) responsible for future replacement of SCR; and
- (b) provide an analysis on the cost-effectiveness between subsidizing the franchised bus companies to advance their bus replacement programme (say from the existing 18 years to 15 years) and the proposed full-scale retrofit.

IV. Any other business

6. There being no other business, the meeting ended at 9:43 am.

Panel on Environmental Affairs

Subcommittee on Improving Air Quality

**Proceedings of the meeting
on Wednesday, 27 June 2012, at 8:30 am
in Conference Room 3 of the Legislative Council Complex**

Time marker	Speaker	Subject(s)	Action required
<i>Agenda Item I - Confirmation of minutes and endorsement of the draft report of the Subcommittee</i>			
000505 - 000612	Chairman	<p>The minutes of the meeting held on 16 April 2012 (LC Paper No. CB(1) 2074/11-12) were confirmed.</p> <p>The draft report of the Subcommittee (LC Paper No. CB(1) 2198/11-12) was endorsed.</p>	
<i>Agenda Item II - Review of Air Quality Objectives</i>			
000613 - 000758	Chairman Administration	Administration's explanation on its response to members' concerns raised at the meeting on 16 April 2012 (LC Paper No. CB(1) 2200/11-12(02)).	
000759 - 002131	Mr CHAN Kin-por Chairman Administration	<p>Mr CHAN Kin-por's enquiries -</p> <p>(a) the number of existing pre-Euro, Euro I and Euro II diesel commercial vehicles in Hong Kong, and the service life of these vehicles;</p> <p>(b) whether emission performance of vehicles would deteriorate with age and if so, there was a need for a comprehensive plan to phase out aged vehicles. Apart from increasing their licence fees, consideration could also be given for the Administration to buy out these aged vehicles. It was recommended that the next term of LegCo should follow up these issues; and</p> <p>(c) latest development of the post-2010 arrangements for emission reduction in the Pearl River Delta (PRD) Region.</p>	The Administration to advise the number of existing pre-Euro, Euro I and Euro II diesel commercial vehicles in Hong Kong.

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		<p>Administration's responses -</p> <p>(a) there were about 120 000 commercial diesel vehicles in Hong Kong, including some 18 000 pre-Euro, 13 000 Euro I, 24 000 Euro II and 65 000 Euro III/IV models;</p> <p>(b) for vehicles of the same emission standard and similar maintenance condition, newer vehicles would generally emit less but the difference would not be significant. At present, it would be for the owners to decide when to replace their vehicles because there was no age ceiling imposed on vehicles;</p> <p>(c) the incentive scheme to encourage replacement of Euro II diesel commercial vehicle was still on-going. So far, about \$264 million (i.e. 49% of the allocated fund) were spent. Members would be informed of the outcome of the scheme upon its expiry in June 2013; and</p> <p>(d) the Administration was taking stock of the progress of meeting the 2010 emission reduction targets, including the effectiveness of various measures implemented by both the Guangdong Provincial Government and Hong Kong Special Administration Region Government. Given the complexity of the work, an expert group had been set up to conduct a final assessment of the delivery of the 2010 emission reduction targets. On the basis of the final assessment, the two sides would strive to complete a joint study on emission reduction arrangements for the PRD Region in the next phase for the endorsement by the PRD Regional Air Quality Management and Monitoring Special Panel. The expert group would complete its work soon and</p>	

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		the results would be released once available.	
002132 - 002904	Mr KAM Nai-wai Chairman Administration	Mr KAM Nai-wai's disappointment at the slow progress in improving the air quality of Hong Kong. Administration's response that it would provide a paper summarizing the achievements made in the past five years in improving the air quality of Hong Kong.	The Administration to provide a paper summarizing the achievements made in the past five years in improving the air quality of Hong Kong
002905 - 003310	Chairman Administration	Chairman's requests/enquiry - (a) a paper setting out the latest development of the post-2010 arrangements for emission reduction in the PRD Region; (b) the number of existing pre-Euro, Euro I and Euro II diesel commercial vehicles which had been replaced under the two incentive schemes; (c) the rationale for only providing the monitoring results of PM2.5 in 2011 when the Environmental Protection Department had been measuring the particulate concentration at roadside (which comprised both PM10 and PM 2.5) since 1999; and (d) to facilitate better understanding, the Administration should provide the monitoring results of PM10 and PM2.5 for the period from 1999 to 2011, and how these monitoring results could translate to the proposed new Air Quality Objectives for PM10 and PM2.5. Administration's response that the monitoring results of PM2.5 in 2011 as set out in LC Paper No. CB(1) 2200/11-12(02) aimed to show the recent trend and monthly variation.	The Administration to - (a) provide a paper setting out the latest development of the post-2010 arrangements for emission reduction in the PRD Region; (b) advise the number of existing pre-Euro, Euro I and Euro II diesel commercial vehicles which had been replaced under the two incentive schemes; and (c) the monitoring results of PM10 and PM2.5 for the period from 1999 to 2011, and how these monitoring results could translate to the proposed new Air Quality Objectives for PM10 and PM2.5.

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003311 - 003927	Mr CHAN Kin-por Administration Chairman	<p>Mr CHAN Kin-por's enquiries -</p> <p>(a) the difficulties in putting forward disincentives (such as increasing the licence fee and frequency of annual inspection) to deter continued use of polluting vehicles; and</p> <p>(b) the impact of setting up low emission zones (LEZ) on other districts since the ratio of low-emission franchised buses running in the latter districts would be reduced.</p> <p>Administration's response -</p> <p>(a) incentive schemes had been put in place to encourage early replacement of pre-Euro, Euro I and Euro II diesel commercial vehicles;</p> <p>(b) subject to the satisfactory outcome of the trial, Euro II and III franchised buses would be retrofitted with selective catalytic reduction (SCR) devices to improve their emission performance;</p> <p>(c) deployment of low-emission franchised buses to routes running through LEZ would also help improve the air quality of districts outside LEZs as these low-emission buses would serve a large area; and</p> <p>(d) other measures, including economic disincentives, would need to be considered in a holistic manner for further deliberation by the next term of LegCo.</p>	<p>The Administration to -</p> <p>(a) advise the difficulties in putting forward disincentives (such as increasing the licence fee and frequency of annual inspection) to deter continued use of polluting vehicles; and</p> <p>(b) advise the impact of the setting up of low emission zones on other districts since the ratio of low-emission franchised buses running in the latter districts would be reduced.</p>
<i>Agenda Item III - Interim findings on the trial of retrofitting franchised buses with selective catalytic reduction devices</i>			
003928 - 004219	Chairman Administration	Administration's explanation on the interim findings of the trial of retrofitting Euro II and III franchised buses with SCR devices and the way forward (LC Paper No. CB(1) 2200/11-12(03)).	

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004220 - 004608	Mr KAM Nai-wai Administration	<p>Mr KAM Nai-wai's enquiries -</p> <p>(a) the cost of the trial, the anticipated funding in the event of a full-scale retrofit of the SCR devices, and the target completion date of the full-scale retrofit; and</p> <p>(b) whether the concerns about additional backpressure and other mechanical problems arising out from the retrofit of SCR had been properly addressed.</p> <p>Administration's responses -</p> <p>(a) on the assumption that the cost of retrofitting a franchised bus with SCR devices was about \$150,000 per bus, the estimated cost for full-scale retrofit of some 3 000 franchised buses would be around \$500 million. A more realistic estimate would be provided when the relevant funding proposal was submitted for consideration by the Finance Committee. Subject to the funding approval, the large-scale retrofit was aimed to be completed in 2015; and</p> <p>(b) the interim findings showed that SCR devices could reduce effectively the emissions of buses on trial without excessively increasing the backpressure of the bus engines. While there were occasional backpressure alarm warnings indicating that the system required attention, none of the backpressure increase reached the level requiring immediate corrective actions. Some other mechanical problems had been found but were resolved after modification and adjustment to the design and construction of SCR systems.</p>	The Administration to advise the cost of the trial, and the anticipated funding in the event of a full-scale retrofit of the SCR devices.
004609 - 005556	Mr CHAN Kin-por Administration Chairman	<p>Mr CHAN Kin-por's enquiries -</p> <p>(a) the parties (the Administration or</p>	The Administration to advise the parties (the Administration

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		<p>the franchised bus companies) responsible for future replacement of SCR, and the frequency of replacement;</p> <p>(b) whether the franchised bus companies would be obliged to improve the emission performance of their bus fleets, given that the retrofit of SCR devices would be fully funded by the Administration;</p> <p>(c) whether consideration could be given for the Administration to subsidize retrofitting of other pre-Euro and Euro I diesel heavy vehicles with SCR devices with a view to further improving roadside air quality; and</p> <p>(d) apart from roadworthiness, emission performance should also be included as part of the annual inspection of vehicles.</p> <p>Administration's response -</p> <p>(a) while the full cost of retrofitting Euro II and III franchised buses with SCR devices would be covered by public fund, the franchised bus companies would be required to bear the subsequent operational and maintenance costs of SCR devices. As to their replacement frequency, the SCR manufacturers involved in the trial were willing to provide a three-year warranty;</p> <p>(b) under the bus replacement programme, franchised bus companies were required to replace franchised buses before they reached 18 years old. Early replacement might be considered taking into account the condition of the buses and financial situation of the franchised bus companies. Based on the age distribution of the existing bus fleets, it was anticipated that all the pre-Euro</p>	<p>or the franchised bus companies) responsible for future replacement of SCR.</p>

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		<p>and Euro I franchised buses would be replaced by 2012 and 2015 respectively;</p> <p>(c) SCR retrofit was not a practicable option for pre-Euro, Euro I and II diesel commercial vehicles (other than franchised buses) because the diversity in engine design and operation modes. Moreover, there were no practicable ways to ensure that the drivers would refill Adblue periodically which was essential to support the operation of SCR devices; and</p> <p>(d) there was no mandatory requirement for owners to replace their aged diesel commercial vehicles as long as the vehicles could pass the annual examination on safety and roadworthiness.</p>	
005557 - 010334	Chairman Administration	<p>Chairman's enquiries/view -</p> <p>(a) the bus routes being serviced by the buses on trial;</p> <p>(b) the progress of the trial on the next batches of bus models to be tested; and</p> <p>(c) it would be more cost-effective to subsidize franchised bus companies to advance their bus replacement programmes than retrofitting Euro II and III franchised buses with SCR devices given the many uncertainties arising from the retrofitting programme, including technical problems, the long lead time for full-scale retrofit, and the reliability of the retrofitted buses.</p> <p>Administration's responses -</p> <p>(a) the buses on trial had been put on normal bus routes comprising both urban and highway traffic conditions; and</p>	The Administration to advise the bus routes being serviced by the buses on trial.

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		<p>(b) Euro II Volvo Olympian, Euro II and Euro III Dennis Trident (accounting for 58% of the existing Euro II and III franchised buses) had been identified suitable for the trial. As for the remaining Euro II and III buses, about 34% were of another six models, which would be the target of the next batches to be tested. The franchised bus companies and SCR suppliers were assessing whether these six models had the space for the retrofit of SCR devices. The same assessment would apply to the remaining very small number of buses afterwards.</p>	
010335 - 011312	Mr KAM Nai-wai Chairman Administration	<p>Mr KAM Nai-wai's view/request -</p> <p>(a) not optimistic about the effectiveness of SCR. There was a need to invite franchised bus companies to express their views before considering the funding proposal for the full-scale retrofit; and</p> <p>(b) an analysis on the cost-effectiveness between subsidizing the franchised bus companies to advance the bus replacement programme (say from the existing 18 years to 15 years) and the proposed full-scale retrofit.</p> <p>Chairman's reiteration that it would be more cost-effective to subsidize the franchised bus companies to expedite the bus replacement programme than retrofitting buses with SCR devices. Other alternatives to improve the emission performance of the bus fleet should also be explored. The concerns of the Subcommittee should be brought to the attention of the next term of LegCo.</p> <p>Administration's response that the trial aimed to assess the technical feasibility and effectiveness of SCR devices, as well as the impacts on bus operations.</p>	<p>The Administration to provide an analysis on the cost-effectiveness between subsidizing the franchised bus companies to advance their bus replacement programme (say from the existing 18 years to 15 years) and the proposed full-scale retrofit.</p>

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		The findings of the trial would be reported to the Panel on Environmental Affairs by the end of 2012.	
011313 - 011359	Chairman Administration	The Chairman thanked the Administration for its contributions in the last year.	

Council Business Division 1
Legislative Council Secretariat
24 July 2012