For discussion
24 November 2008

LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS

Early Replacement of Old Commercial Vehicles

PURPOSE

This paper seeks Members' views on the option to increase the licence fees of old commercial vehicles to accelerate their replacement.

BACKGROUND

2. In April 2007, the Administration introduced a one-off grant scheme to encourage the early replacement of pre-Euro and Euro I diesel commercial vehicles[1]. The original application deadline for pre-Euro diesel commercial vehicles was end September 2008. On 25 September 2008, we informed Members by way of a Legislative Council Brief of the decision to extend the application period for pre-Euro diesel commercial vehicles to 31 March 2010 (i.e. same as that of Euro I diesel commercial vehicles). We also informed Members of our intention to consider the option of increasing the vehicle licence fees of old commercial vehicles to further accelerate their replacement.

[1] Pre-Euro diesel vehicles were first registered before 1 April 1995 whereas Euro I diesel vehicles were first registered between 1 April 1995 and 31 March 1997 for buses and goods vehicles over 4 tonnes, and between 1 April 1995 and 30 September 1998 for other diesel commercial vehicles.

MAJOR CONSIDERATIONS

Environmental Benefits

3. Diesel commercial vehicles[2] are the dominant source of roadside air pollution. They account for about 90% and 75% of the total vehicular emission of respirable suspended particulates (RSP) and nitrogen oxides (NOx) respectively. The two are the principal air pollutants at the roadside. Among diesel commercial vehicles, pre-Euro and Euro I vehicles are more polluting. They emit about 15 to 30 times more RSP and about 1.5 to 2 times more NOx than Euro IV ones[3].

4. Up to end October 2008, under the one-off grant scheme, about 9,670 pre-Euro and Euro I diesel commercial vehicles were replaced. There are still about 27,600 pre-Euro diesel commercial vehicles and about 16,900 Euro I diesel commercial vehicles running on our roads, accounting for about 23% and 14% of the diesel commercial vehicle fleet respectively. They remain a major source of roadside air pollution[4].

5. Should all the remaining pre-Euro and Euro I diesel commercial vehicles be replaced by Euro IV vehicles, the emissions of respirable suspended particulates (RSP) and nitrogen oxides (NOx) from the diesel commercial vehicle fleet will be reduced by 59% and 33% respectively. The territory-wide emissions of RSP and NOx will be reduced by about 14% and 5% respectively. Accelerating the replacement of pre-Euro and Euro I diesel commercial vehicles will therefore bring about substantial benefits to roadside air quality.

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[2] Diesel commercial vehicles include mainly light buses, goods vehicles and coaches.

[3] Euro IV emission standards are the statutory emission requirements for newly registered vehicles.

[4] Based on the number of licensed vehicles as at 15 October 2008, diesel commercial vehicles accounted for 87% and 75% of local vehicular respirable suspended particulates (RSP) and nitrogen oxides (NOx) emissions respectively. Within the diesel commercial vehicle fleet, pre-Euro vehicles account for 42% and 36% of its RSP and NOx emission respectively, and Euro I vehicles account for 19% and 15% of its RSP and NOx emissions respectively.

A "Carrot and Stick" Approach

6. Extending the application period of the one-off grant scheme for pre-Euro diesel commercial vehicles will go some way in encouraging their replacement. However, apart from continuing to offer financial incentives to vehicle owners to speed up the retirement of old commercial vehicles, we believe it is also worth considering the option of introducing certain financial disincentives to deter continued ownership and usage of these more polluting vehicles, such as raising the vehicle licence fees of these aged commercial vehicles.

7. The higher licence fee should also be applied to aged commercial vehicles equipped with engines more advanced than those of pre-Euro and Euro I vehicles because their emissions also tend to increase when ageing. Vehicle engine components are subject to wear and tear during operation. For this reason, older vehicles in general tend to have more breakdowns and higher tailpipe emissions. For example, defects in fuel injector, which are common among old diesel vehicles, could increase particulate emissions by 30% to four times. Replacing old vehicles by new ones that are equipped with more advanced or even the same type of emission control devices can benefit roadside air quality considerably.

Guiding Principles

8. When developing a proposal to increase the vehicle licence fees of aged commercial vehicles, we believe the following underlying principles should apply-

(a) **Annex A** sets out the schedule of the current vehicle licence fees, which range from $1,289 to $8,429 a year. The extent of the proposed increase in vehicle licence fees should be of sufficient deterrence against the continuing use of aged commercial vehicles;

(b) older commercial vehicles, which tend to be more polluting, should face a higher degree of increase in their vehicle licence fees;

(c) the proposed increase in vehicle licence fee for aged commercial vehicles should be put in place as soon as possible. However, we should also consider allowing owners of existing aged commercial vehicles, particularly those facing higher increase, to make use of the one-off grant scheme to replace their vehicles. A possible option therefore is to effect the increase immediately after the completion of the one-off grant scheme on 31 March 2010;

(d) the vehicle age limit for differentiating aged commercial vehicle should be reasonable because pre-mature retirement of vehicles are not necessarily environment-friendly. By the time the application deadline of the one-off grant scheme expires on 31 March 2010, pre-Euro vehicles will be over 15 years old. Consideration could therefore be given to adopting a vehicle age of 15 as the threshold for the licence fee increase; and

(e) higher vehicle licence fees should apply to all aged commercial vehicles irrespective of their fuel types. Same as diesel vehicles, petrol or liquefied petroleum gas vehicles will emit more pollutants in the course of ageing because of engine wear and tear. The continuing operation of these aged vehicles should also be deterred.

OTHER OPTION

9. We have considered the option of mandating the retirement of old commercial vehicles but do not recommend going down this route because of its grave implications for the transport trades. Vehicle owners who cannot afford to

replace their old commercial vehicles will be forced out of business. As far as we know, only Singapore and the Mainland have put in place such requirements. Singapore requires buses and goods vehicles to retire at 17 and 20 years old respectively. The Mainland requires coaches and goods vehicles to retire at 10 years old but extension of vehicle service life is allowed. The European Union, US, UK and Japan do not force their aged commercial vehicles to retire.

VIEWS SOUGHT

10. Members are invited to comment on the proposal for increasing the licence fees of commercial vehicles including the principles spelt out in paragraph 8. Subject to Members' support, we will work out a proposal to increase the vehicle licence fees of aged commercial vehicles for consultation with the transport trades.

Environmental Protection Department

November 2008

Annex A

The Current Vehicle Licence Fee Levels

Vehicle Class	Current Annual Licence Fee (HK$) (2008)
(1) Goods Vehicle and Special Purpose Vehicle (excluding Van-type Light Goods Vehicle) Permitted gross vehicle weight:	
(a) not exceeding 1.9 tonnes	1,289
(b) exceeding 1.9 tonnes but not exceeding 5.5 tonnes	2,404
(c) exceeding 5.5 tonnes	4,694
(2) Van-type Light Goods Vehicle Permitted gross vehicle weight:	
(a) not exceeding 1.9 tonnes	2,229
(b) exceeding 1.9 tonnes but not exceeding 5.5 tonnes	4,254
(3) Public Bus	
(a) for the driver; and	25
(b) addition fee for each seat for a passenger	50
(4) Private Bus	
(a) for the driver; and	25
(b) additional fee for each seat for a passenger	45
(5) Public Light Bus	8,429
(6) Private Light Bus	2,749
(7) Taxi	3,159