

ITEM FOR FINANCE COMMITTEE

HEAD 44 - ENVIRONMENTAL PROTECTION DEPARTMENT

Subhead 700 General other non-recurrent

New Item “One-off grant to encourage diesel public light bus owners to replace their vehicles early with ones that are run on liquefied petroleum gas or electricity”

Members are invited to approve the creation of a new commitment of \$261 million for providing a one-off grant to encourage diesel public light bus owners to replace their vehicles early with ones that are run on liquefied petroleum gas or electricity.

PROBLEM

Diesel vehicles are the dominant source of air pollution at the street-level. It is necessary to adopt all practical measures to reduce emissions from the existing diesel vehicle fleet.

PROPOSAL

2. The Director of Environmental Protection, with the support of the Secretary for the Environment, Transport and Works, proposes to create a new commitment of \$261 million for providing a one-off grant to encourage owners of diesel public light bus (PLB) to replace their vehicles early with ones that are run on liquefied petroleum gas (LPG) or electricity.

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JUSTIFICATION

3. Diesel vehicles are a major source of air pollution in Hong Kong at the street level. They account for about 95% of the respirable suspended particulates (RSP) and 75% of the nitrogen oxides (NO_x) emitted by the entire vehicle fleet. Reducing emissions from diesel vehicles is therefore crucial to improving the roadside air quality in Hong Kong.

4. The total number of PLB licences is limited at 4 350. At present, 2 475 of them are green PLBs and the remaining 1 875 are red PLBs. Green PLBs are licensed to operate fixed routes, while red PLBs can choose their own routes.

5. In the 1999 Policy Address, we announced that, subject to satisfactory results of a trial of LPG light buses in Hong Kong, we intended to provide existing diesel light bus owners with financial assistance to encourage them to replace their vehicles early with LPG ones. A local trial of LPG and electric PLBs (the latter were included at the PLB trade's request) was carried out from June 2000 to January 2001. The report of the trial was released in June 2001. The report indicated that an LPG light bus emits almost zero particulates and only 50% of the nitrogen oxides (NO_x) of a Euro III diesel model¹. Electric light buses are emission-free. The trial further showed that both LPG and electric light buses are suitable for use in Hong Kong. However, electric models might have to be confined to shorter routes because of battery constraints.

6. In November 2001, we announced a proposed incentive scheme to encourage existing diesel light bus owners to replace their vehicles early with ones that are run on LPG or electricity. The proposed replacement programme is voluntary under which owners of diesel light buses can continue to use diesel light buses but will not be eligible for any incentive. Under our proposal, we will provide a one-off grant of \$60,000 or \$80,000 for each eligible diesel PLB that is replaced by an LPG or electric one respectively. To be eligible for the one-off grant, owners of diesel PLBs aged 10 or above at the time of de-registration must replace their vehicles by end-2003. Owners of diesel PLBs below 10 years old at the time of de-registration must replace their vehicles by end-2004. The one-off grant will also be made available to owners of diesel PLBs who have replaced their vehicles with an LPG or electric one before the commencement of the incentive scheme. Assuming the proposal in respect of PLBs is approved, we are also prepared, in order to provide incentive for owners of diesel private light buses to replace their vehicles by LPG ones, to waive the First Registration Tax (FRT) (equivalent to 4% of the taxable value of a new light bus) of the replacement vehicles with the same deadlines for applications as for the PLB incentive scheme.

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¹ All new diesel light buses being sold in Hong Kong meet the Euro III emission standard, which is the prevailing standard of the European Union.

7. We have held a number of meetings with members of the light bus trade to gauge their views on the proposed incentive scheme. The requests raised by the trade at the consultation are summarized as follows -

- (a) the proposed one-off grant of \$60,000 for each replacement LPG PLB is not sufficiently attractive to the PLB trade whose business is suffering due to the current economic situation. The grant should be increased to offset partly the higher maintenance costs of LPG light buses and the operating loss that would be incurred by PLB operators whose routes are of some distance from LPG stations since they would have to stop operating en route to refilling. The grant should also be increased to compensate PLB owners who replace their vehicles before their vehicles reach normal retirement age. Some suggested increasing the grant to \$80,000, while others felt that it should be increased to \$150,000;
- (b) Since Euro III diesel PLBs are environmentally friendly too, a one-off grant should also be offered for replacing existing diesel PLBs with Euro III diesel PLBs. Some suggested that the amount of the grant should be the same as that for replacement by LPG PLBs, while others thought that it could be slightly lower;
- (c) the proposal to offer only FRT exemption for replacing private school light buses is unfair. Owners of private school light bus should be offered the same one-off grant as PLB owners since their vehicles are equally polluting;
- (d) Government should ensure continued supply of diesel light buses since the proposed scheme is voluntary;
- (e) Government should ensure the supply of more than one LPG light bus models to prevent any vehicle manufacturer from monopolizing the LPG light bus market; and
- (f) Government should extend the deadlines of application for the proposed incentives to allow more owners of diesel PLBs to replace their vehicles under the incentive scheme. The extension would also provide owners longer time to study the actual performance of different light bus models in Hong Kong before deciding on which one to choose. Some suggested that the deadline for diesel PLBs be set at two years from the date of completion of the last LPG filling station, while others felt that there should not be any deadlines at all.

ASSESSMENT OF VIEWS

8. We have evaluated the requests from the trade and consider that -
- (a) the proposed one-off grant of \$60,000, together with the much lower price of LPG, should be reasonably attractive to PLB owners whose routes are within the vicinity of LPG stations. Since we announced the proposed incentive scheme last November, LPG has become even cheaper. With prevailing LPG and diesel prices (current motor diesel price is \$5.87 per litre while LPG price is between \$1.85 and \$2.08 per litre), we estimate that 81% of the PLB operators would experience a net income increase between \$1 and over \$3,000 a month and the remaining 19% would experience a net income reduction between \$1 and \$3,000 a month. PLB owners who will suffer recurrent operating loss after switching to LPG light buses will be less likely to take advantage of the incentive scheme. We acknowledge that fuel prices and consequently the savings in fuel cost do change from time to time. However, the experience so far is that the price of LPG at dedicated LPG stations² (where about 70% of the LPG taxi fleet currently get their fuel from) has been leading the LPG market. The price of LPG at all refilling stations has been stable despite increases in the prices of motor petrol and diesel. With regard to maintenance requirements, the trial of LPG PLBs revealed that the maintenance requirements of LPG and diesel light buses are similar. Furthermore, since the objective of the proposed scheme is to encourage early replacement, compensation for pre-mature retirement of existing diesel PLBs is not relevant;
 - (b) Euro III emission standard is effectively the minimum standard that all newly registered vehicles have to meet. Therefore, there is no justification for offering any incentive to owners for replacement by Euro III diesel PLBs. In any case, LPG light buses are environmentally cleaner as an LPG light bus emits almost zero particulates and only 50% of the nitrogen oxides of a Euro III diesel light bus;

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² The Government has tendered at nil premium 12 government sites for development into large scale dedicated LPG filling stations under the 21-year build, operate and transfer contracts. Under the contracts, the maximum price of LPG is determined by a formula. In addition, the Government has also signed commercial agreements with existing petrol filling station operators to retrofit their stations with LPG filling facilities in return for incentives in the form of land lease/tenancy extensions at nominal/nil premium. The price of LPG is determined by the operators under this arrangement.

- (c) one of the justifications for providing the one-off grant for replacement by LPG PLBs is to encourage those owners of diesel PLBs who would experience only a marginal increase in income on replacement by LPG PLBs to make such a switch. Unlike PLB operators, operators of LPG private school light buses have more flexibility in refilling, as most of them do not run schedules as intensive as PLB operators. Also, as financial resources are limited, we should make the best use of public funds to achieve the greatest possible environmental results. We should therefore focus the limited financial resources on replacing diesel PLBs which contribute to 80% of the emission of the diesel light bus fleet;
- (d) there are currently three makes of diesel light buses available in Hong Kong: Mitsubishi, Mercedes-Benz and Volkswagen. They all meet the Euro III emission standard. Light bus owners who do not take advantage of the incentive scheme would still have a range of diesel vehicles to choose from;
- (e) Toyota and Mercedes-Benz are currently supplying LPG light buses in Hong Kong. Together with (d) above, owners will have a choice of diesel and LPG models. In addition, the Administration has decided to increase the maximum gross vehicle weight of light buses from 4 tonnes to 5.5 tonnes as requested by the light bus trade. With this change in specification, 18 vehicle models³ currently available worldwide (including 8 LPG models and 10 diesel models) would meet our weight, dimension and emission specifications, and the relevant manufacturers/agents could introduce them into Hong Kong;
- (f) to encourage early replacement, we originally set the deadline at end-2003 for application for the incentives by owners of older diesel light buses and end-2004 for owners of younger light buses. The request of the trade for extending the deadlines is not unreasonable. With an extension of the deadlines -
 - (i) light bus operators will have more time to study the performance of LPG light bus before making a decision; and
 - (ii) an extension would allow owners of younger light buses more time to let their vehicles run to the end or closer to the end of their serviceable life before replacing them with LPG or electric light buses.

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³ Including fourteen 16-seater models and four 12-seater models, the latter could be used as private light buses.

We now therefore propose to extend the deadlines to end-2004 for older diesel PLBs and end-2005 for younger diesel PLBs. Reasons are set out in paragraph 11 below; and

- (g) we have carefully considered the suggestion of setting the deadline at two years from the completion of the last LPG filling station. However, we do not see the basis for it, as what primarily matters to the PLB trade is the geographical location of LPG stations, i.e. how convenient the LPG stations are located, but not much on the number of LPG stations. In terms of the numbers of stations, 35 LPG stations are currently in operation. This will gradually increase to at least 43 including three new dedicated stations by around the third quarter of this year. In terms of refilling capacity, the provision of 43 LPG filling stations would adequately serve the entire LPG taxi fleet and over 97% of the entire public and private light bus fleet. Additional LPG filling stations that will come on stream over the next few years will continue to improve the geographical coverage and refilling capacity for LPG light buses.

CONSULTATION WITH LEGISLATIVE COUNCIL PANELS

9. We informed the Legislative Council Panel on Environmental Affairs and Legislative Council Panel on Transport of our views stated above at a joint panel meeting on 13 June 2002. Members indicated in-principle support to the proposed incentive scheme but moved and passed the following two motions regarding the implementation details -

- (a) include private school light buses in the proposed incentive scheme so that owners who replace their vehicles with an LPG model will be offered a one-off grant of \$60,000; and
- (b) extend the deadline of application for the incentives as follows -
 - (i) from end-2003 to end-2005 for owners of existing diesel light buses aged 10 or above at the time of de-registration; and
 - (ii) from end-2004 to end-2006 for owners of existing diesel light buses below 10 years old at the time of de-registration.

10. After careful consideration of these suggestions, we find that we are unable to accede to the request for also making available the one-off grant to owners of replacement LPG private school light buses. This is because, as explained in paragraph 8(c) above, PLBs contribute to 80% of the emissions of the entire light bus fleet. Private school light buses only account for about 12%. We should use the limited financial resources to achieve the greatest environmental benefits for the community. Moreover, private school light bus operators have more flexibility in refilling (and hence could take advantage of the lower motor LPG price) as well as the proposed FRT exemption should constitute a reasonable attraction to private school light bus operators in switching to LPG light buses.

11. As regards the deadlines of application for the one-off grants by owners of replacement LPG and electric PLBs, we agree to extend the originally proposed deadlines by one year. Under the revised incentive programme, owners of diesel PLBs aged 10 or above at the time of de-registration must replace their vehicles by end-2004, and owners of diesel PLBs below 10 years old at the time of de-registration must replace their vehicles by end-2005. We have thoroughly considered the suggestion of the Panels of a two-year extension, but could not accept it for the following reasons -

- (a) the objective of the proposed incentive scheme is to encourage the early replacement of older and more polluting diesel light buses. As at May 2002, almost 50% (or 2 000) of the diesel PLBs and about 30% (or 650) of the diesel private light buses are over 10 years old. Extending the deadlines for as long as two years would run counter to our objective and delay improvements to air quality; and
- (b) under the mandatory scheme to replace 18 000 diesel taxis with LPG ones, diesel taxi owners are given 3 years and 5 months to apply for the one-off grant (save for owners of older taxis who had 1 year and 5 months). The proposed incentive scheme for owners of the 4 350 diesel PLBs would have 3 years and 5 months to apply for the one-off grant (2 years and 5 months for the older light buses), despite the much smaller number of diesel PLBs and the voluntary nature of the replacement programme.

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FINANCIAL IMPLICATIONS

Non-recurrent Cost

12. Subject to Members' approval, our plan is to start accepting applications for the one-off grant the earliest by August 2002. The estimated cashflow is as follows -

2002-03	2003-04	2004-05	2005-06	Total
\$'000	\$'000	\$'000	\$'000	\$'000
55,020	70,740	73,620	61,620	261,000

13. We will meet the cashflow requirement in 2002-03 by offsetting an equivalent amount under Head 106 Miscellaneous Services Subhead 789 Additional commitments. We will also include subsequent cashflow requirements in the annual Estimates.

Recurrent Cost

14. The proposal will not give rise to additional recurrent financial implications. The Transport Department will be primarily responsible for the administration of the scheme with its existing staffing resources.

BACKGROUND INFORMATION

15. As mentioned above, apart from providing a one-off grant to encourage PLB owners to replace their vehicles early with ones that are run on LPG or electricity, we would also provide financial incentive in the form of FRT exemption for owners of existing diesel private light buses to encourage them to replace their vehicles early with LPG ones.

16. Emissions from diesel vehicles can be reduced by a combination of measures. Our strategy is to -

- (a) introduce clean alternative to diesel vehicles where practicable;
- (b) adopt the most stringent vehicle emission and fuel standards;

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- (c) adopt practical technology to mitigate emissions from the existing vehicle fleet; and
- (d) ensure proper maintenance of in-use vehicles through a combination of voluntary and regulatory measures.

17. Since 1999, we have provided a one-off grant to encourage diesel taxi owners to replace their vehicles early with LPG ones, introduced ultra-low sulphur diesel, increased the fixed penalty on smoky vehicles, tightened the emission requirements of newly registered vehicles in line with the requirement in the European Union and provided a one-off grant to assist owners of pre-Euro diesel light vehicles to install particulate reduction devices on their vehicles. Recently, we have also obtained funding approval from Members for launching a programme to retrofit pre-Euro heavy diesel vehicles with particulate reduction devices. The present proposal to assist existing diesel light bus owners to replace their vehicles early with LPG or electric ones forms part of the overall programme to improve air quality.

Environment, Transport and Works Bureau
July 2002