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Panel on Environmental Affairs

Meeting on 3 July 2001

**Background brief on
Trial scheme of liquefied petroleum gas and electric light buses**

Background

Although diesel vehicles account for only one-third of the vehicle population, they are a major source of air pollution because they take up two-thirds of the vehicle mileage travelled in Hong Kong and emit a considerable amount of respirable suspended particulates and nitrogen dioxide. A clean practicable alternative is therefore required to reduce the heavy reliance on diesel vehicles and hence controlling vehicle air pollution effectively and efficiently. To this end, the Administration has since 1997 launched a number of trial schemes on the use of liquefied petroleum gas (LPG) for taxis and light buses as well as the use of electricity for light buses.

Phasing out of diesel taxis and diesel light buses

Taxi

2. Following the positive and supportive results of the trial scheme between 1997 and 1998, the Administration decided to provide grants to diesel taxi owners for switching to LPG vehicles with a view to achieving a total ban of diesel taxis by 2005. The subject was discussed at a series of joint meetings conducted by the Panel on Environment Affairs (the Panel) and the Panel on Transport in 1998. Members noted that the success of the LPG taxi scheme would hinge on the competitiveness of LPG price, operating costs of LPG taxis, availability of LPG filling stations, and adequacy of LPG vehicle workshops and mechanics. To enable the smooth switch from diesel to LPG, financial incentives such as tax concessions should be provided.

3. In June 2000, the Finance Committee approved a commitment of \$752.52 million to encourage taxi owners to replace their diesel taxis with LPG taxis. The scheme provided a one-off grant of \$40,000 to each diesel taxi replaced before or during 2001, and any of the six years old and younger diesel taxis replaced in 2002 and 2003. The Administration's plan was to stop the registration of new diesel taxis with effect from 1 January 2001, and to prohibit diesel taxis of seven years old and above from running on the road after 2003, while no diesel taxis would be allowed to run on the road after 2005. In this connection, the Administration tabled the Air Pollution Control (Vehicle Design Standards) (Emission) Regulations at the Council meeting on 6 June 2001 which aimed to stop importation of diesel taxis from 1 August 2001. Some members were concerned about the availability of LPG filling stations and urged that the deadlines for replacement be deferred. According to the information provided to the Finance Committee on 12 June 2001, 9 000 taxis had been switched to the use of LPG.

4. Regarding the adequacy of LPG filling stations, in response to Mrs Miriam LAU's Council question on 10 January 2001, the Secretary for the Environment and Food confirmed that there were 12 LPG filling stations in operation, and that discussions with various oil companies were underway to retrofit suitable existing petrol filling stations with LPG filling facilities. The Administration's target was to provide adequate LPG filling stations for the entire fleet of 18 000 LPG taxis by the end of 2001. To this end, incentives such as free lease/tenancy extensions and additional government land at nil premium/rent, if necessary, would be granted to the operators of those existing petrol filling stations which were suitable for retrofitting with LPG filling facilities.

Light buses

5. A trial scheme of electric and LPG light buses has been launched since June 2000. At the joint meeting between the Panel and the Panel on Transport on 7 November 2000, members noted that no major operational problem had been encountered so far, and that the operating cost of a LPG or electric light bus was comparable to that of a diesel one. However, the need for charging facilities had restricted the operation of electric light buses to shorter or flatter routes only. Similar problem had also been experienced by LPG light buses as a result of the lack of convenient LPG filling facilities along their routes. Noting the differential between LPG light bus and diesel light bus in term of mileage per litre of fuel, the Administration was requested to explore the possibility of reducing the engine capacity of electric light buses so as to cut down on fuel consumption.

6. At the Council meeting on 14 February 2001, Mr LAW Chi-kwong raised a question on the difficulties encountered by the supplier of electric light buses in setting up power charging facilities for electric light buses. These included the long time required for various government departments to vet the relevant applications and the difficulties in setting up power charging facilities at potential sites due to the presence of other underground facilities. According to the Administration, the trial scheme has

just been completed and the monitoring committee comprising government departments, representatives of the transport trade, light bus manufacturers and vehicle experts is reviewing the results, including the problems encountered during the trial. A report will be submitted to the Government in due course. Should the Government decide to implement an alternative-fuel light bus scheme that included replacing diesel light buses with electric models, it would consider how applications for setting up of charging facilities could be approved more efficiently and how technical problems arising from the installation works could be resolved.

Other alternative fuel

7. The use and regulation of rapeseed oil as vehicle fuel were raised by Mr LAW Chi-kwong in a Council question on 18 October 2000. Rapeseed oil was said to have emitted less smoke but more nitrogen oxides than those fuelled by diesel. According to the Secretary for the Environment and Food, the Government may by regulation prohibit the sale of motor vehicle fuels that did not meet prescribed specifications in accordance with the Air Pollution Control Ordinance. At present, there are specifications for petrol and diesel used in motor vehicles. The Government would regulate the use of other fuels for motor vehicles, including rapeseed oil, if necessary.

8. The subject of the availability of alternative fuel was discussed at the Panel meeting on 6 February 2001. According to the Administration, staff of the Environmental Protection Department has been travelling around to observe research programmes in the development of alternative fuels such as fuel cell in Canada, Europe and California. Fuel cell is a potential alternative source of energy for motor vehicles and its use would result in zero emission. There are other alternative fuels, including natural gas and compressed gas. It is anticipated that a variety of alternatives would find their way into the market over the next five to 15 years. In the meantime, the Administration is conducting a trial scheme on the use of bio-diesel which included rapeseed oil.

Legislative Council Secretariat

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