

**For advice on
24 May 2004**

**LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS**

**Retrofitting Pre-Euro Diesel Vehicles
with Emission Reduction Devices**

PURPOSE

This paper reports the progress on retrofitting pre-Euro diesel vehicles with emission reduction devices and consults Members on a proposal to retrofit emission reduction devices on pre-Euro diesel heavy vehicles, the engines of which have to be kept running for operational reasons while the vehicles remain stationary.

PROGRESS OF RETROFIT PROGRAMMES

2. Diesel vehicles are a major source of roadside air pollution in Hong Kong. Since a pre-Euro diesel vehicle emits up to seven times more particulates than a Euro-III equivalent, one of our measures to reduce motor vehicle emissions for the purpose of improving air quality is to retrofit pre-Euro diesel vehicles with emission reduction devices.

3. With the support and funding approval of the Finance Committee (FC) of Legislative Council (LegCo) vide FCR(2000-01)11, we completed in 2001 a programme with an approved commitment of \$50.88 million to provide owners of pre-Euro diesel light vehicles with financial assistance to retrofit their vehicles with particulate traps or catalysts. The devices can reduce the particulate emissions from each vehicle by at least 30%. About 24 000 vehicles were retrofitted in that programme. We have mandated

the installation for this category of vehicles since December 2003.

4. Again, with the support and funding approval of the FC vide FCR(2002-03)17, we have also implemented another programme with an approved commitment of \$600 million to retrofit ordinary pre-Euro diesel heavy vehicles with catalysts since December 2002. The catalyst can reduce a vehicle's particulate emissions by about 35%. The device can also reduce the vehicle's smoke, carbon monoxide and hydrocarbon emissions by about 40%. Up to the end of April 2004, almost 85% (about 28 700 in number) of the vehicles had been retrofitted. When this programme is completed around the end of this year, we will make a proposal to the Legco to mandate the installation for this category of vehicles as we did for the category of pre-Euro diesel light vehicles in 2003.

5. When we consulted Members of the Panel on Environmental Affairs in January 2002 and sought funding approval from the FC for the programme mentioned in paragraph 4 above in May 2002, we informed Members that the programme would be open to about 41 000 pre-Euro diesel heavy vehicles (the estimated no. is now revised to about 33 800) but would not cover about 4 000 pre-Euro diesel heavy vehicles, the engines of which have to be kept running while stationary to support their on-board ancillary equipment (such as crane lorries, concrete mixer trucks and signal light vehicles). It was because the trials that had been carried out up to then had revealed that this type of "long idling vehicles" when retrofitted with certain kinds of catalysts would emit white smoke occasionally. We undertook to continue the search for suitable devices for this type of vehicles and revert to Members.

PROPOSAL

6. Through further trials in collaboration with the transport trades and the Hong Kong Polytechnic University, we have now found emission reduction devices that can work on long idling vehicles without causing the

white smoke problem. The Monitoring Committee for the trial, which comprises representatives of transport trades, academics and other relevant government departments, is satisfied with the trial results and supports the retrofitting of pre-Euro long idling diesel heavy vehicles with suitable emission reduction devices.

7. We propose to implement a retrofit programme to cover this remaining category of pre-Euro diesel vehicles, the number of which has reduced from about 4 000 in 2002 to about 3 500 now. With the agreement of the Monitoring Committee, we are now finalizing a technical specification for the emission reduction devices with the assistance by an international expert panel as what we did for the retrofit programme mentioned in paragraph 4 above. We intend to seek funding approval from the FC within this legislative session for the retrofit programme. The total cost of the programme is estimated to be \$70 million, i.e. about \$20,000 for each vehicle. Subject to FC's approval, we will proceed with competitive tendering in August this year. The international expert panel that has drawn up the functional requirements will be invited to evaluate the compliance of the tender submissions, same as for the retrofit programme for the other pre-Euro diesel heavy vehicles. The retrofit programme is expected to be completed within 2005.

8. Similar to other pre-Euro diesel vehicles, we plan to make the installation mandatory for this category of vehicles after the completion of the programme.

ADVICE SOUGHT

9. Members are requested to advise on our proposed retrofit programme explained above.

Environment, Transport and Works Bureau
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