

**For discussion on  
23 July 2014**

**LEGISLATIVE COUNCIL  
PANEL ON ENVIRONMENTAL AFFAIRS**

**Review of Emission Test Fee  
for Designated Vehicle Emission Testing Centres**

**PURPOSE**

This paper seeks Members' support on the proposed increase to the emission test fee for Designated Vehicle Emission Testing Centres (DVETCs), which has not been revised since 1998.

**BACKGROUND**

2. Under the Road Traffic Ordinance (RTO) (Cap. 374), the Commissioner for Transport may, for the purpose of ascertaining whether a motor vehicle complies with vehicle emission standards, require the registered owner to have the motor vehicle tested at a DVETC.

3. All DVETCs are now privately-run. Users of their service will have to pay a test fee, which is stipulated in Schedule 10 of the RTO. The current fee of \$310 was set on a full cost recovery basis in 1998. At that time, the Government also operated a DVETC<sup>[1]</sup> and the emission test was an idling emission test for checking smoke (i.e. targeting diesel vehicles). Since 1999, we have upgraded the emission test to an advanced smoke test, which is done with the aid of a chassis dynamometer and takes longer time to complete.

***Declining Number of DVETCs***

4. To conduct the advanced smoke test, DVETC operators have to assign larger space for installing the dynamometers and incur additional expenses for their acquisition, maintenance and operation. The operators have been urging

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<sup>1</sup> The Government DVETC was operated by the Environmental Protection Department in Homantin which was closed in 2000 upon expiry of land lease.

for an increase in the test fee for a long time because of the additional costs and longer testing time. The additional costs, coupled with the inflation in recent years and the substantial decline in the number of smoky vehicles<sup>[2]</sup> because of the overall improvement in vehicle's maintenance, have made the operation of DVETC under the prevailing test fee of \$310 unsustainable. The number of DVETCs has declined from 12 in 2005 to six now. Indeed only two are in operation due to equipment breakdown. Virtually all of the centre operators are now considering the closure of their business to avoid investing a considerable sum on replacing their dynamometers unless the test fee is adequately raised. A list of the existing DVETCs is at **Annex A**.

5. The existing dynamometers for conducting the smoke test cannot support the dynamometer-based emission test for petrol/LPG vehicles. Potential DVETC operators are reluctant to make new investments in equipment unless the test fee is raised. So far, only two operators have set up their dynamometers for providing the test service for petrol/LPG vehicles on the understanding that the test fee will be reviewed in consultation with the Legislative Council. Details of these two centres are at **Annex B** and both are in Kowloon. One of them has got his centre designated as DVETC while the other is working on the designation. If the test fee is adequately raised, up to three additional centres might be set up by other operators at a later stage.

### ***Increase of Test Fee***

6. DVETC operators consider it necessary to increase the test fee from \$310<sup>[3]</sup> to at least \$680 for diesel vehicles weighing over 5.5 tonnes, \$730 for smaller diesel vehicles and \$620 for petrol and LPG vehicles. The trades claim that the proposed fees are the minimum acceptable as they may still not cover the operation costs in full though they will reduce their losses to a more tolerable level. Under the current fee of \$310, they would not continue the operation of their centres because of the sustained and continued losses. Some centre operators have also cautioned that despite the proposed fee increase, they might

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<sup>2</sup> The number of smoky vehicles has been sharply decreased from about 40 000 to 7 000 per year due to a combination of control measures. They include the launch of a dynamometer-based smoke test, the increase of fixed penalty fine for smoky vehicles to \$1,000, replacement of diesel taxis and light buses with LPG, retrofitting pre-Euro diesel vehicles with particulate removal devices and introduction of more stringent vehicle emission and diesel fuel standards.

<sup>3</sup> The test fee includes \$30 for a fee chargeable by the Government for the supply of the form for the certificate of compliance

have to close some of their centres that are now providing test services for diesel vehicles to make way for the test for petrol/LPG vehicles since they have difficulties in finding suitable sites for setting up testing centres. They also propose to keep regular review of the test fee. Their justifications of raising the test fee are at **Annex C**.

7. We agree with DVETC operators on the need to increase the test fee, which has remained unchanged for 16 years. The cumulative inflation alone from 1998 to 2013 is about 25%. Besides, new investments and operating costs for the dynamometer-based emission tests are required. As such, we propose to increase the test fee from \$310 (for all vehicle types) to as follows:

<u>Test for</u>	<u>Proposed fee level (\$)</u>
Heavy Diesel Vehicle	680
Light Diesel Vehicle	730
Petrol/LPG Vehicles	620

8. The proposed increase in test fee would not impact on vehicle owners who take good care of the maintenance of their vehicles proactively. As for those who overlook proper vehicle maintenance, increasing the test fee to a reasonable level could be a deterrent for their negligence. Subject to Members' support, we will take forward the test fee increase proposal by consulting the transport trades and preparing the effecting legislative amendments. To implement the new test fee, we need to amend Schedule of 10 of the RTO and the target effective date is 2 January 2015.

## **FINANCIAL IMPLICAIONS**

9. Given all the DVETCs are privately run, the proposed fee increases will not result in increase in revenue of the Government.

## **ADVICE SOUGHT**

10. Members are invited to support the proposed increase in vehicle test fee.

**Environment Bureau / Environment Protection Department**  
**July 2014**

### List of Designated Vehicle Emission Testing Centres

Light Diesel Vehicles (weighing not more than 5.5 tonnes)

Company	Address	Remarks
Crown Motors Ltd.	Lot 355, Kiu Wong Street, Kiu Tau Wai Industrial Area, Ping Shan, Yuen Long, N.T.	<i>Testing service is suspended because its dynamometer is out of service. The company will consider to repair the dynamometer to continue the testing service if the test fee is raised.</i>
Dah Chong Hong (Motor Service Centre) Ltd.	G/F, 20 Kai Cheung Road, Kowloon Bay, Kowloon	
Dah Chong Hong (Motor Service Centre) Ltd.	1 Hong Yip Street, Yuen Long, N.T.	<i>Testing service is suspended because its dynamometer is out of service. The company plans to resume service when the new dynamometer arrives in late 2014.</i>
China Inspection Co., Ltd.	50 Fuk Hi Street, Wang Chau Industrial Estate, Yuen Long, N.T.	<i>Testing service is suspended because its dynamometer is out of service.</i>

Heavy Diesel Vehicles (weighing over 5.5 tonnes)

Company	Address	Remarks
Crown Motors Ltd.	Lot 355, Kiu Wong Street, Kiu Tau Wai Industrial Area, Ping Shan, Yuen Long, N.T.	<i>Testing service is suspended because its dynamometer is out of service. Will terminate service to make room for the petrol/LPG vehicles dynamometer.</i>
China Inspection Co., Ltd.	50 Fuk Hi Street, Wang Chau Industrial Estate, Yuen Long, N.T.	

### Designated Vehicle Emission Testing Centres for Petrol/LPG Vehicles

#### Petrol/LPG Vehicles except Light Buses

Company	Address	Remarks
Dah Chong Hong (Motor Service Centre) Ltd.	G/F, 20 Kai Cheung Road, Kowloon Bay, Kowloon	
Environmental Technology Consultants Ltd.	G/F., No. 92 Sung Wong Toi Road, Tokwawan, Kowloon	

#### Petrol/LPG Light Buses

Company	Address	Remarks
Environmental Technology Consultants Ltd.	G/F., No. 92 Sung Wong Toi Road, Tokwawan, Kowloon	

## **Justifications by Operators of Designated Vehicle Emission Testing Centres for Increasing the Emission Test Fee**

- The current test fee is \$310, in which \$30 is payable to Government for supply of the form of the certificate of compliance. It was set in 1998 based on the idling smoke test on a full cost recovery basis. The conduct of the test requires only a smoke meter for checking the opacity of smoke and a tachometer for checking engine speed, both are lower cost small size standard garage equipment. In the case of a dynamometer-based emission test, the test will need a chassis dynamometer together with a control computer, mobile engine cooling fans to protect the vehicle engine from overheating, etc. The testing centre will also have to be equipped with an exhaust extraction system to properly vent the vehicle exhaust emissions.
- Besides, a dynamometer-based emission test will need a larger space not only for setting up the dynamometer but also to keep people at a safe distance from it. The dynamometer will have to be fixed to the ground with a solid foundation. These additional requirements will incur additional expenses associated with the test.
- As to the costs of setting up and operating a centre providing dynamometer-based emission test services, the following factors are relevant –

### Dynamometer and Other Equipment

The cost of a dynamometer (including construction and the associated electrical and mechanical equipment) could be in the order of \$1.6 million to \$2.4 million, depending on the size of the vehicle that it can serve. Normally, it can be used for six years but more intense use could shorten its lifespan. On the basis of a typical working life of six years, the averaged cost could amount to \$33,000 a month for a dynamometer serving heavy vehicles and \$22,000 for that serving smaller ones.

Apart from the setting-up costs, the operation of a dynamometer will incur expenses arising from electricity consumption, regular servicing (including calibration) and maintenance, etc. The latest estimate is that the running

cost for a dynamometer could amount to about \$24,000 to \$36,000 a month for serving light and heavy vehicles respectively.

### Rental

The rentals of centres vary from site to site. In general, they are lower in the New Territories as compared to those in urban areas such as Kowloon, Hong Kong Island, etc. To test the emission of heavy vehicles, the centre will have to be larger in area and such sites are more likely available in the New Territories. As for smaller vehicles, particularly private cars, the centre operators might prefer setting up their centres in urban areas, where most of their customers are located. As such, the typical rental for a test centre for heavy diesel vehicles is \$82,500 a month and that for smaller vehicles is \$120,000 a month.

### Staff Cost

Under the Code of Practice issued by the Commissioner for Transport under Section 77F of the RTO, a DVETC should have one responsible person and two testers. There are also other supporting staff members for conducting the emission test. All together, the typical staff cost of a centre is estimated to be \$78,000 a month.

- Given the above cost estimates, a typical test centre will incur a monthly expense of about \$230,000 for heavy vehicles and \$240,000 for smaller ones. If the expenses are to be fully recovered from the test fee, the expenses will have to be spread among the emission test done in the month.

### **Test Fee for Diesel Vehicles**

- As for the centres for checking the smoke emissions of diesel vehicles, the number of emission tests done in 2013 was reduced to 3 308 for heavy vehicles and 2 548 for smaller ones. This means an increase in test fee to about \$1,700 for heavy vehicles and \$4,600 for smaller ones if the existing centres (i.e. two for heavy vehicles and four for smaller ones) have an equal share of the emission tests.

- Centre operators, in the spirit of corporate citizenship, agree to reduce the test fee increase to \$680 for heavy vehicles and \$730 for smaller ones<sup>[4]</sup>.

### **Test Fee for Petrol/LPG Vehicles**

- The monthly cost of running a centre is about \$240,000. EPD's survey suggests that about 7% of the petrol/LPG vehicle fleet could have excessive emission problems. If EPD's target of setting up five centres is realized, each of the centres could test up to 5 000 vehicles a year. That could mean a test fee of about \$620.
- Centre operators have also pointed out the uncertainties associated with EPD's estimate of the number of petrol/LPG vehicles having excessive emission problems. They are also mindful of the potential decline in the number of tests because of the effectiveness of the dynamometer-based emission test in raising the vehicle maintenance condition of the petrol/LPG vehicle fleet as in the case of diesel vehicles. A lower number of vehicles to be tested by centres will lead to losses in their operation. Again, as in the case of diesel vehicle emission test, they, in the spirit of corporate citizenship, agree to set the emission test fee for petrol/LPG vehicles at \$620.

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<sup>4</sup> The underlying assumption is that each centre will receive testing of at least two vehicles per hour, which is much higher than the average level in 2013 – 0.8 vehicle per hour for heavy vehicles and 0.3 vehicle per hour for smaller ones. However, the centre operators still cannot cover the operation cost due to relative low smoky vehicles spotted.