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**(ACE Paper 27/96)**  
**for advice**

**Proposed Amendments to  
Air Pollution Control (Motor Vehicle Fuel) Regulation and  
Air Pollution Control (Vehicle Design Standards)(Emission) Regulations**

**Introduction**

This paper seeks Members' advice on the amendments to the Air Pollution Control (Motor Vehicle Fuel) Regulation (referred to as the "Fuel Regulation") and the Air Pollution Control (Vehicle Design Standards)(Emission) Regulations (referred to as the "Emission Regulations").

**Background**

2. Both the Fuel Regulation and the Emissions Regulations are aimed to improve emissions from vehicles for the abatement of air pollution. The current amendment exercise seeks to upgrade the emission standards and the quality of motor fuel in line with latest international trends.

3. In the Second Review of the White paper: Pollution in Hong Kong - A time to act (1993), the Government proposed, inter alia, the following measures to tackle air pollution from motor vehicles:

- a) more stringent emission standards for large diesel vehicles;
- b) a requirement to use higher quality automotive diesel to enable adoption of up-to-date vehicle emission standards;
- c) imposition of higher penalties on smoky vehicles; and

- d) strengthened vehicle inspection and maintenance programmes for commercial vehicles.

This amendment exercise will fully implement the first two measures and further fulfil our continuing effort to adopt the most appropriate fuel and emission standards for Hong Kong. We are still working on proposals for higher penalties and strengthened inspection programmes and Members will be consulted on them later this year.

### **Proposed Amendments to the Emission Regulations**

4. In October 1996, the European Union will implement more stringent emission standards for motor vehicles. The proposed amendment Regulations will enable Hong Kong to require newly registered vehicles to adopt, with effect from 1 April 1997, these upgraded emissions standards, and other appropriate standards of USA and Japan. The main features are:

- (a) for petrol vehicles not more than 3.5 tonnes, to USA 1994 and EU Directive 94/12/ECC;
- (b) for petrol vehicles over 3.5 tonnes, to tightened Japanese production average limits;
- (c) for large diesel vehicles over 4 tonnes, to European Union standards (i.e. Euro 2) which are equivalent to US 1994 standards; and
- (d) for all diesel vehicles, to a smoke emission standard of 35 Hartridge Smoke Units.

These new emission standards will reduce particulates emissions from individual large diesel vehicles by about 60%. Nitrogen oxides emissions will also be reduced by about 10%.

5. The proposed amendments, apart from that described in para 4(d) concerning smoke standard, do not cover emission standards for diesel vehicles of four tonnes or less. We are reviewing, in the light of the public's comments and views, the proposed scheme to replace this category of diesel vehicles with

unleaded petrol ones. For the time being, hence, the existing emission standards will continue to apply to them.

6. The draft Air Pollution Control (Vehicle Design Standards) (Emission) (Amendment) Regulations is at Annex A.

### **Proposed Amendments to the Fuel Regulation**

7. Advanced motor vehicle engines require a complementary clean fuel to meet modern stringent emission standards. The proposal is to update the existing fuel specifications in the Fuel Regulation on 1 April 1997, so that they can support the new emissions standards proposed above. The major improvements to the specifications are:

(a) *for unleaded petrol*

- (i) reducing the maximum lead content from 0.013 grams per litre to 0.005 gram per litre; and
- (ii) limiting the maximum benzene content to 5.0% by volume.

(b) *for motor vehicle diesel*

- (i) reducing the maximum sulphur content from 0.20% by weight to 0.05%.

8. The opportunity is also taken to clarify the wording in section 6(2) of the Regulation, referring to leaded and unleaded petrol, to spell out correctly the intention of the provision.

9. The draft Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation 1996, with Schedules 1 and 2 containing the tightened fuel specifications, is at Annex B.

10. It should be noted that implementation of these measures, as well as those at para. 4(c) and 4(d) above, will do no more than maintain Respirable Suspended Particulates and nitrogen oxides concentrations at their present unacceptable levels. Only with the additional breakthrough of requiring half of the diesel fleet to use unleaded petrol or a similar clean fuel can there be any prospect of meeting the relevant Air Quality Objectives.

## **Consultation**

11. The oil suppliers have been consulted on the proposal to upgrade the quality of motor fuel. They have confirmed the availability of upgraded motor fuel meeting the new specifications by 1 April 1997.

12. The Motor Traders Association has been consulted on the proposed tightening of vehicle emission standards and has no objection in principle. Some Japanese vehicle dealers have nonetheless expressed difficulties in making a full line of vehicle models available by the proposed implementation date of 1 April 1997, but they would be able to do so within a few months. On the other hand, European vehicle dealers are supportive of the proposal, and are able to implement the new standards as proposed.

13. The transport trades have been consulted on these measures. They are generally supportive provided that motor fuel and vehicles meeting the upgraded requirements are available without drastic increases in costs.

## **Implementation and Staff Implications**

14. There are no financial and staffing implications.

## **Economic Implications**

15. The increase in cost for unleaded petrol to meet the new specifications is negligible, while the cost increase for diesel is estimated to be about 3% (i.e. \$0.2 per litre), which should be affordable.

16. Some vehicle models are already able to meet the new emission requirements and no cost increase will thus be incurred. For models which require modifications to comply with the new standards, there may be an increase in retail price by up to 10%.

## **Public Reaction**

17. The public will welcome the introduction of higher quality motor vehicle fuel and more stringent emission standards which will help reduce air pollution. We do not anticipate objections from the transport trades.

## **Advice Sought**

18. Members are requested to endorse :

- (a) the Air Pollution Control (Vehicle Design Standards) (Emission) (Amendment) Regulations at Annex A; and
- (b) the Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation at Annex B.

Planning, Environment and Lands Branch  
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