

**For discussion
on 27 February 2001**

**Legislative Council
Panels on Environmental Affairs and Transport**

Proposal to Control Idling Engines

INTRODUCTION

This paper reports on the views collected by the Administration in consulting the District Councils and the transport trade on the proposal to control idling engines; analyses these views; and seeks Members' views on control of idling engines.

CONSULTATION RESULTS

2. During the period from July 2000 to January 2001, we consulted the 18 District Councils and the transport trade, the latter comprising groups representing taxi and public light bus operators, truck drivers, public omnibus operators, school bus operators and operators of works vehicles, on the proposal to control idling engines.

Views of District Council Members

3. Members of the 18 District Councils generally agreed that control of idling engines could reduce the nuisance caused to nearby pedestrians and residents by emissions from vehicles waiting on the road and that, therefore, such control should be put in place. However, many of them considered it impracticable to introduce a total ban on idling engines. They pointed out that some vehicles had to leave their engines running after coming to a stop due to practical, operational needs. Moreover, the health of the driver and the passengers of a passenger vehicle could be adversely affected if its engine and, as a result, also its air-conditioning, had to be switched off while waiting in the hot weather. Some District Council members were worried that traffic and air pollution problems could be aggravated if motor drivers, due to various reasons, chose not to switch off their engines but to circulate on the road. Some members pointed out that, if the control scheme allowed a grace period such that a vehicle could keep its engine running after coming a stop before its engine had to be switched off, enormous enforcement problems could arise. For instance, enforcement agents would find it difficult to judge for how long a vehicle with a running engine had come to a stop. This could give rise to disputes. There were also District Council members who

suggested that, if control was to be introduced, a reasonable grace period should be provided to allow motor drivers to get used to the new requirement. The following are other suggestions offered by District Council members –

- (a) that the control scheme should be implemented in phases. Private cars should be brought under control first and the control scheme extended to other types of vehicles gradually;
- (b) that a trial should be conducted in the winter when there would not be a need for a vehicle to keep the engine idling for the purpose of supporting the air-conditioning;
- (c) that the control scheme should only be implemented in the locations where pedestrians are easier to be affected by vehicle emissions, such as inside bus termini, and in the vicinities of hospitals and schools; and
- (d) that exemption should be granted to certain types of vehicles such as public transport, emergency vehicles and vehicles with a genuine need to keep the engines idling for operational reasons.

Views of Transport Trade

4. We have also consulted different sectors of the transport trade, who generally agreed that control of idling engines should be implemented to reduce the nuisance caused by emissions from vehicles waiting on the road to nearby pedestrians and residents. However, they indicated that any across the board control scheme imposed on passenger vehicles that would require the air-conditioning of the vehicles to be switched off while they were waiting would cause discomfort to the driver and the passengers and thus adversely affect their operations. The more specific views that have been put forward by the different groups of the transport trade are as follows –

- (a) **Taxi operators** – Taxis at taxi stands should be exempted from the control scheme. This is because they have to move forward all the time and, if they are subject to the control scheme, they would have to switch off and restart their engines frequently leading to extensive wear and tear of the motor starter and resulting in higher emissions. As regards taxis on the road, they would need to keep their engines running to maintain their air-conditioning while waiting for passengers in the hot weather or when it is raining. If we subject them to the control scheme, what some would do for practical reasons would be to keep circulating on the road for passengers. This would have a negative impact on air quality.

- (b) **Public light bus (PLB) operators** – At present, a PLB driver is required under the law to stay on his bus while passengers are boarding the bus. If PLBs are subject to the control scheme, the relevant legal provision should be amended so that the driver could wait by the side of the bus while passengers are boarding it. If it is decided that the first few PLBs waiting at the front of a PLB stop should be exempted from the control scheme, the exempted area should be clearly demarcated to avoid disputes arising from enforcement. Moreover, the need to control idling engines should be considered in the light of the introduction of the alternative-fuel light bus programme.
- (c) **Public omnibus operators** – Vehicles with turbo engines should be exempted as by design their engines would have to be left idling for a few minutes after coming to a stop to allow cooling before they should be switched off. Government should adopt an educational and advisory approach instead of going for legislation.
- (d) **Truck operators** – Controlling idling engines only during certain seasons and setting a time limit for engines to idle after the vehicle has come to a stop should not be considered as these will give rise to confusion and disputes. Any control scheme should cover the whole of Hong Kong. Trucks should be exempted from any control scheme due to their operational needs to keep the engine on after the vehicle has come to a stop.
- (e) **School bus operators** – They are already being asked by schools to switch off their engines while waiting inside school compounds or just outside schools. It would be necessary for them to keep the engine on while waiting on the road for students who are late in turning up in order to keep the air-conditioning on for maintaining air supply and the comfort of other students already on the bus.

OUR ANALYSIS ON VIEWS OBTAINED FROM CONSULTATION

Environmental Benefits and Reducing Nuisance

5. We consider that controlling idling engines will reduce the nuisance caused by their exhaust and heat emissions to nearby pedestrians and residents. However, implementing such control may not necessarily help to improve air quality. If we impose a total ban on idling engines, some motor drivers, due to operational needs or in order to maintain the air-conditioning in the hot weather, may choose to circulate on the road instead of switching off

their engines. Under such a situation, not only would the traffic problem worsen, more emissions would be produced by vehicles. We have compared the emissions from a vehicles when it is travelling at 25 kilometres per hour (kph) and when its engine is idling. Our assessment is that, for a private car, the nitrogen oxides it will emit when travelling at 25 kph will be two times more than if its engine is idling. A diesel taxi and a diesel light bus travelling at the said speed will emit four times more particulates than if their engines are idling. A heavy diesel vehicle when travelling at the said speed will even emit 13 times more particulates than if its engine is idling. Therefore, if we decided to ban idling engines and vehicles choose to circulate on the road to circumvent the restriction, the pollution caused could cancel off the environmental benefits gained, or the air pollution problem could even deteriorate.

6. Franchised buses and public light buses would have to follow their set routes when they are carrying passengers. Therefore, they could not opt for circulating on the road to avoid having to switch off their engines. There should not be a great deal of opportunities for school buses to wait on the road unless students are late for the bus. As regards public light buses and taxis waiting at designated public light bus and taxi stands, to circulate on the road to circumvent the restriction is not an option for them. Our assessment is that, if it is decided that control of idling engines should be introduced, vehicles that choose to circulate on the road rather than having their engines switched off would mainly be private cars, non-franchised omnibuses such as tourist coaches, taxis waiting at the roadside and vehicles hat have a genuine operational need to keep their engines running after coming to a stop. Since no control scheme could stop motor drivers from choosing to circulate on the road and avoiding the restriction, any scheme to control idling engines may not necessarily improve air quality. There is also the probability of the control scheme leading to deterioration of the air pollution problem.

The Need of Exemptions

7. There are commercial vehicles that need to keep their engines running after coming to a stop for operational reasons. Examples of these are concrete mixers, emergency vehicles, trucks with compartment or container for cold storage, and other works vehicles. There are other vehicles with turbo engines, and by design the engines of such vehicles have to be kept running for a while after the vehicle has come to a stop to allow for cooling of the engine. There are also other types of vehicles which engines have to be kept running after the vehicle has come to a stop so that the air-conditioning could be kept on for practical reasons. Examples of such vehicles are armoured vehicles and passenger cars which windows could not be opened (such as some tourist coaches and bigger school buses). Our view is that any control scheme must not affect the normal operations of such vehicles.

Enforcement Difficulties

8. An across the board control scheme will give rise to not a few enforcement problems. This is because it is not easy for an enforcement agent to judge accurately whether or not a vehicle has only just switched on its engine or for how long a vehicle has stopped with its engine idling. If we allow a vehicle to keep its engine running for a set time limit after the vehicle has come to a stop, an enforcement agent will have difficulty judging whether or not the vehicle has been idling for longer than the time limit. If there are no objective criteria for enforcement, a lot of unnecessary disputes would arise between the driver and the enforcement agent.

9. Taking the assessment above into account, we consider that any option for controlling idling engines must effectively reduce the nuisance caused by vehicle emissions to nearby pedestrians and residents while at the same time it must not aggravate the air pollution problems. Moreover, clear, objective and practicable enforcement criteria must be set in order to achieve the expected results. Based on the considerations discussed above, one of the more practical options is to work on the areas where pedestrians and residents could be easily affected by emissions produced by vehicles waiting on the road. We could consider drawing up codes of practice to require franchised buses, taxis and public light buses waiting at bus termini or taxi stands to switch off their engines when there are no operational needs to keep them on. For instance, we could consider making it a requirement that all franchised buses are to switch on their engines only a few minutes before boarding of passengers starts. We could consider making it a requirement that, where there are no passengers waiting at a taxi stand, all taxis in the queue must have their engines switched off other than the few taxis at the front of the taxi stand. We could consider making it a requirement that only the first few public light buses waiting at a public light bus terminus could keep their engines running. Other than these, we could also consider asking transport trade groups to appeal to their member drivers to work in concert to reduce the nuisance caused by emissions from idling engines to pedestrians and residents.

ADVICE SOUGHT

10. Members are invited to offer their views on the considerations discussed above and on control of idling engines.

Environment and Food Bureau
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**Comparison of Exhaust Emissions
between a Running Engine and an Idling Engine**

(Note: Assuming the vehicle is moving at a speed of 25 kilometres per hour and with the air-conditioning on.)

Emissions of a running engine as compared to those of an idling engine				
	Nitrogen Oxides	Particulates	Carbon Monoxide	Hydrocarbon
Private Car	Two times more	Difference negligible	23% more	25% more
Diesel Taxi	26% more	Four times more	40% more	One and a half times more
Diesel Light Bus	Double	Four times more	Double	Three and a half times more
Heavy Goods Vehicles	Double	13 times more	Double	Four times more