

Enclosure

**Views from the Hong Kong Institution of Engineers
on the Administration's proposal to ban idling vehicles with running engines
for submission to LegCo Panel on Environmental Affairs**

General

1. The Hong Kong Institution of Engineers (HKIE) refers to the Administration's proposal to ban idling vehicles with running engines.
2. With the community's increasing concern about air quality and global warming, HKIE shares the view that it would be desirable to introduce measures limiting the reduction of pollutants. In particular where the emission sources were non-productive and operations of them were not necessary.
3. HKIE agrees the intensity of operating vehicles in our dense urban environment is one of the main local emission sources. By implementing a package of measures to tackle the problem and improve our environment, the local air quality could be improved and the well being of the people in Hong Kong enhanced.
4. To help the community develop responsibility towards environment, the HKIE in principle supports the idea of imposing statutory ban requiring engines to be switched off while idling for comfort purposes.
5. However, the Proposal appeared only tackling vehicles with passenger movements, although suggestion was made to extend coverage to other types in future. It was also a lone standing one instead of a part of a full package. We consider that it is the lack of a thorough evaluation for its justification; the summarily scope of control rendering uncertainty and unfairness, and the coarse approach of the framework taken and most of all, the failure to address the gist of the matter that failed to convince HKIE.

Justification

6. It appears the justification of the proposal is primarily based on the "*air pollution, heat and noise nuisance*" caused to "*nearby pedestrians and shops*" as "*some drivers do not switch off the engines of their vehicles while waiting in order to run their air-conditioning systems for comfort.*"
7. HKIE notes a table showing an increased number of complaints received over the last few years with 501 for year 2006 was listed as further support. HKIE has no information whether all these were mainly on private vehicles where there were reasons for the need of continual operation of the air-conditioning would be less convincing. In fact, it is also not known on what, where and when that the complaints were made or whether taxi in queue were included or otherwise.
8. Even if so, HKIE opines the increased number of complaints cannot solely implicate that indeed there is a worsening trend and it was also solely due to private cars idling to keep their air-conditioning running for comfort.

9. It could be partly, and most likely mainly, due to the growing awareness of our environment to spark off filing complaints to the authority on mischievous acts of fellow citizens. Or a fruitful result from the Administration's effort in the last few years of strengthening public education to promote the good practice of switching off idling engines, perhaps?

10. HKIE notes there were no other data provided for further assessment. In this regard, HKIE ventures to make a few generous assumptions. That (1) the number of cases reported is solely on private cars running the air-conditioning for comfort; (2) during the period of summer days or a period of six months; and (3) as always, reported figure only represented a small percentage, say one percent for this presumption, of all incidents.

11. With these assumptions, HKIE finds there were perhaps about 280 private cars running their idling engines for comfort on each and every day in the summer of the year 2006 territory-wide.

12. HKIE hence cannot find any sense to empower a statue to combat this, let alone there are vehicles hundred-folded of that number are idling in front of a traffic light each and every day, all year round.

Overseas experience

13. HKIE notes experiences in some of the overseas cities were cited.

14. It seemed the control in Singapore covered all types of vehicles. Singapore has more in-town car park spaces available. In fact many of the buildings were designed and constructed to devote half of the floor areas to car park immediately next to tenancy activities both in town area and industrial estates. The need of on street loading and unloading is less in Singapore than in Hong Kong. In Hong Kong, in-town parking is actually discouraged. Parking space is also scarce in our industrial areas that so much so transit vehicles are subject to charge for entrance. Many Taxi and PLB stands for passengers were often from make shift locations close to pedestrians and shops.

15. The City of Toronto was about prohibiting *excessive* idling (emphasis added) and also had made two sensible exemptions. One is the ambient temperature and the other related to layover or stopover parking. Summer temperature in Toronto can be a lot more serious than Hong Kong albeit of a shorter period. Reports of cardiac arrests due to cars broken down in winter and summer times were not uncommon in Ontario. Our legislation should also consider this possible impact to those less healthy citizens.

16. One of the regulations of United Kingdom cited was related to noise arisen from construction but the other more relevant one was drafted with civility. That a person is (1) required to first stop the running of the engine if there was a reasonable belief that an offence was committed; and (2) only upon failure when asked, an offence was committed. The requirement is two folded before an offence is committed.

17. HKIE does not find all these overseas experiences cited being entirely ready for our immediate application. For one thing, none of the cities has PLB roaming around towns and their respective franchised bus transport is not as congested as our systems.

Technicality

18. Obviously engine is subject to more wear and tear from repeated stop and restart.
19. Without knowing the details of the operational circumstances and how frequent the engine has to be switched off and re-started, HKIE cannot make a further assessment on such effect.
20. In general, the battery has to be replaced more frequently. Likewise the ignition mechanism and the return coil spring of the starter motor. Car battery is toxic and disposal of it would need special handling. Ignition mechanism is now mostly electronic and can be an integral part of a bigger component, the designed overall life span of which may not have taken the consideration of the increased onus on one particular portion. Dismantling a starter motor may require draining the engine oil depending on engine construction.
21. The combustion of the first few cycles of a freshly started engine may not burn completely with residual fuel in the cylinders. The catalysis converter down stream of the exhaust manifold requires a constant flow of hot exhaust to maintain temperature high enough for an efficient operation.
22. HKIE opines the technical down side for some 280 cars making a few more starts a day is not serious enough on the technical wear and tear side but if so then weren't it true the whole situation is not serious enough that warrant a statutory control?

Types of Vehicles Banned

23. We agree for fairness and sharing of the responsibility to reduce emission, a ban, if introduced, should be applicable to all types of engines.
24. However the Proposal also noted a turbo charged engine would have a different characteristic that needed to be considered.
25. HKIE also wishes to point out, with the fast advancement of technology, there would be other types of engines that may also require special consideration. A hybrid car is not entirely non-productive and only producing emission when idling. A battery-powered car requires higher loading on starting than at idling and is now commercially available. The development of both engine types may very well rest with an idling engine running for enhanced performance.
26. HKIE believes it would not be desirable to draft further exemptions for each and every technical development from time to time. Not that HKIE would suggest one who owns a battery-powered vehicle would be allowed the luxury of running the car air-conditioning unit. HKIE is trying to point out proposing a summary ban based on engine types may be soon outdated.
27. HKIE proposes it should not be what types of vehicles that should be kept under the control, if at all, but rather the function or activities of the related operation.

Types of Activities

28. It is easy to perceive that for public and emergency services; and for safety and

health purposes, a ban is not desirable. This criterion shall apply to police & emergency vehicles and armoured cars & ambulances as long as they are running their intended errands. Or a private car offering assistance to an ailing passenger?

29. The function related to commercial activities is more difficult to pin down.

30. The Proposal remained silent on controlling delivery trucks. As 7-seaters and private cars are also used for making delivery of goods as well as passengers. It is not known how this would be dealt with.

31. It would also worth to consider whether the engines are running for commercial needs or simply for comfort. To address this, it would need an on-the-spot assessment and not from a standard list of exemptions, a proposition contrary to the philosophy of the ease of administration. It is therefore not surprise to note the Proposal allowed the first two taxis and PLBs in designated stands be exempted. HKIE finds this exemption arbitrary without considering the overall passenger movements. HKIE submits, perhaps, it was the quest for simple administration that is at fault.

32. It appears running an idling engine for mere comfort should be condemned. HKIE agrees. The Proposal also suggested it would be a matter of comfort and not one of commercial needs that tourists may have to put up with a not so cool coach.

33. As such, the argument whether the operation of air-conditioning is a need to conduct commercial activities or one mere for the driver's comfort was dispensed with by the Proposal. HKIE opines this approach is over simplified the issue for the sake of simplicity. HKIE also opines for safety measure, it is not desirable to have a driver standing outside the vehicle whilst passengers are boarding.

34. If it were the air conditioning we wish to crucify, we may wish to start with the franchised buses that are notoriously running with very chilled air. HKIE does not see any safety need to maintain such a low ambient temperature inside the buses.

35. But there is also a need for the health consideration of running a cool car before elderly, infant or pets getting on board. There is also a safety reason to keep the windows from fogging up in humid weather. Nonetheless immediately driving off in a heated cabin is not conducive to safe driving. Likewise when typhoon and rainstorm warning signals were hoisted. The *en bloc* ban does not allow these provisions.

36. HKIE finds the Proposal in its present form may prejudice some commercial operators with advantage to others. HKIE also finds the need of health and safety concern had not been thoroughly taken into account.

37. HKIE still believes we should ban abusive usage of air-conditioning in vehicles but finds it difficult to isolate such abuses clearly and swiftly.

Proposed Framework

38. HKIE notes and appreciates the argument for not allowing a grace period for drivers to leave their engines idle for a while after stopping. HKIE also notes a all year round ban would yield better result than with selected time or seasons.

39. Nevertheless, though it is not widely and commonly acknowledged, it is a better practice to turn off ancillary equipment one by one before switching off the master key. Equally it may be necessary to keep the engine running to close the power windows before leaving the vehicles or to adjust power seats and mirrors before driving off. Some vehicles would need an idling engine to run the fan to cool down the engine in hot weather as what one would do to avoid over heating of the engine by making stops alongside the curb away from slow moving traffic. Hence the suggestion of no grace period would create different types of disputes as well as not being conducive to safe operation of vehicles.

40. Thus HKIE cannot fully agree in pursuing this environmental policy objective, the banning of idling vehicles is an act which relates to the manner how a vehicle parks or stops on roads or in meter spaces. It also relates to the transit moment immediately after the vehicles had made a stop and the moment immediately before the vehicles were about moving off.

41. HKIE cannot make any comments whether Traffic Warden or EPD officers would be well trained in identifying whether a vehicle is stationary or in such “transit moments”.

42. HKIE notes except for the sake of enforcement simplicity, there is in fact no strong argument to have the ban to be enforced 24 hours a day considering the primal justification of the Proposal was based on the on the “*air pollution, heat and noise nuisance*” caused to “*nearby pedestrians and shops.*” The other reason in adopting an absolute ban at all times is to avoid the confusion caused by posting up yet another traffic signage.

43. HKIE agrees Hong Kong has more than its fair share of traffic signage with various time slots allowed for on street loading and unloading. In this connection HKIE views, in pursuit of the objective of emission control, the Proposal could be more effectively executed as a traffic control.

Alternative Proposal

44. In essence the Proposal aims to control unnecessary emission due to idling cars not in motion. HKIE would like to provide the following alternative proposal/arrangement for consideration of the Government in making the Proposal more practicable and remarkable and more importantly, to ensure the purposes of the Proposal are well served.

45. Entry to Aberdeen tunnel is occasionally blocked off in the morning. A sign advising the drivers to turn off the engines could be set up. A run down timer to inform expected time of stoppage would be helpful.

46. In San Francisco, California, traffic lights were used to control alternate lane movement of vehicles in front of the toll plaza of the Oakland Bay Bridge.

47. Similar measures taken of closing down alternate lanes approach to the Cross-Harbour Tunnel with the sign to turn off the engines would enable hundred of cars not to aimlessly idling during the rush hours. There are about four in-bound lanes on the approach. HKIE opines a two-minute clearance for each lane would allow vehicles of all types turning off engines for at least a period of 4 to 5 minutes during each traffic light cycle at the Hong Kong side.

48. In New York, every toll booth of Lincoln Tunnel accepts auto pay or exact changes

and each with a cashier attended to give changes. This is useful to avoid delay due to cars changing lanes on approach. A measure that we may wish to consider to speed up traffic in front of the Cross-Harbour Tunnel at the Hung Hom side.

49. HKIE believes further suitable locations and road junctions could be identified in adopting the installation of signage of “stop and switch off” across the territory for immediate benefit.

50. The implementation for above could be swiftly dealt with by amending existing traffic regulations. HKIE is willing in offering further comment and assistance in this regard.

Equitable enforcement

51. HKIE also has concern on the equity. The ban is meant to be territory-wide but excluding private premises. Rightly or wrongly, if suspicious sentiment that owners could run their vehicles idle in private car parks and/or having chaffers running in circles for added advantages arises, it does harm to the society. Owing private cars is one of the social accomplishments prided by most citizens and it is not desirable to turn this into a social dissatisfaction.

52. The Proposal advocated citizens could still dispute liability for the contravention in a magistrate court after receiving a fixed penalty on the spot. HKIE finds this assurance dubious.

53. It is not just the cost of raising a complaint to the magistrate is far beyond the reach of average citizens. It is also promulgating the preference of rule by law instead of rule of law.

Conclusion

54. HKIE agrees Hong Kong has the highest road traffic density in the world. However HKIE wishes to see related legislation proposed for widening up the streets.

55. HKIE also notes passengers loading and layoff areas for private cars are still more as discretion of developers instead of a policy of town planning.

56. HKIE sees there are still many rooms for improvement in enforcing switching to LPG engine for taxi and PLB with diesel engines.

57. HKIE does not find sufficient incentive for switching to hybrids although to follow the control on aggregate emission level on total car sales as in California is too ambitious for us.

58. HKIE also notes a large proportion of the franchised bus were still with engines less than Euro IV standard whilst comprising one third of the public traffic movement.

59. HKIE notes and accepts the noble concept of zero emission is better than some, even very small, emission.

60. A concept, however noble, still remains as a concept. To blow it out of proportion to justify a proposal is not pragmatism.

61. Were banning idling engines be pursued, HKIE would like to see
- (a) It is one of the measures of a total package by taking on board the above consideration.
 - (b) It should also be very specific in prohibiting what type of vehicle and under what circumstances they would be subject to control. A list of exemptions is not desirable. A list of dedicated enforcement is preferred.
 - (c) It should only be enforced in selected area on limited hours for maximum benefit with a minimum effort.
 - (d) It should adopt the UK two limbs requirement as being more desirable and the need for Traffic Warden to be trained to identify stationary vehicles vis-à-vis in transit is not necessary. A fixed penalty of \$320 instead of summon is sufficient.
 - (e) A longer period for transition, say not less than one year, is preferred