

立法會  
*Legislative Council*

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From : Clerk to the House Committee  
To : Members of the House Committee

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**Remarks made by Director of Environmental Protection during a  
Radio Programme Interview**

At the House Committee meeting on 31 March 2000, the Chairman instructed that the transcript of the recent remarks made by Mr Robert LAW, Director of Environmental Protection, relating to the motion debate on "Reduction of emissions from diesel vehicles" be provided to Members. Mr LAW's remarks were made during an interview on the radio programme, Hong Kong Today, on Wednesday, 29 March 2000. The motion was moved by Hon Mrs Miriam LAU for debate at the Council meeting on 13 December 1995.

2. Please find attached the transcript (Appendix I) of the interview and a copy of the Official Record of Proceedings of the debate (Appendix II). If Members wish to listen to the tape of the interview (about 5 minutes) or obtain a copy of the tape, please contact Miss Kathleen LAU, Chief Public Information Officer (2869 9281 or Room 008, Legislative Council Building).

3. I also attach a copy of Mr LAW's speech (Appendix III) made at his "End of Year Press Briefing" on 23 February 1999. Members may wish to read the sidelined paragraphs on pages 5 and 6 of the English version or pages 4 and 5 of the Chinese version.

( Mrs Justina LAM )  
Clerk to the House Committee

Encl.

環境保護署署長於 2000 年 3 月 29 日(星期三)  
在"Hong Kong Today"電台節目中接受訪問的逐字紀錄本  
Transcript of Director of Environmental Protection's Interview on  
"Hong Kong Today" on Wednesday, 29 March 2000

*Programme host :*

Well, to discuss the worsening air pollution, we are joined on the line by the Director of Environmental Protection, Robert LAW. Mr LAW, good morning to you.

*Mr Robert LAW :*

Good morning.

*Programme host :*

Thanks for joining us this morning. Do you think it's time now for some introduction of emergency measures.

*Mr Robert LAW :*

Well, I was listening to what Selina had to say before and I couldn't agree more that this sort of air pollution that we are suffering is going to give Hong Kong a bad name from the tourists' point of view. The problem that we are facing, as I said to you yesterday morning, is that there is really very little that can be done to speed up the cleaning up of the air quality problem. The problem is far more complex, I think, than some people think. And really there are no simple quick magic solutions to make it alright.

*Programme host :*

No quick simple magic solutions, but we seem or appear to have been putting up with this worsening air pollution problem for a long time now, and very little action seems to have been taken.

*Mr Robert LAW :*

Well, I myself, I think, is probably more frustrated than you are about this, because we put before the Legislative Council about 5 or 6 years ago the problem and predicted it was going to get worse. At that stage, we proposed that we should change the diesel taxis and minibuses over to using petrol, using unleaded petrol and catalytic converters which could have certainly dealt with about 25% of the problem that we've got now. Unfortunately, we weren't successful in getting their support and the trade wouldn't support it either. What we have been doing since then is desperately trying to find other solutions that would be politically and also economically acceptable to the trade. I think most people are probably aware that we're trying to get the taxis and minibuses now to change over to LPG gas as quick as possible, but there are practical difficulties with that. As I mentioned yesterday.....

*Programme host :*

Yes, but people who phoned us often said that why can't the LPG stations be built. What's the problem with building these stations ?

**Mr Robert LAW :**

Well, the simple problem is that when you have compressed LPG gas, you have a potentially hazardous situation. You can't just put them in any old place because if there is an accident at one of these stations through the filling operations, then it could be potentially, extremely serious.

**Programme host :**

So, we're not going to build these stations?

**Mr Robert LAW :**

We are building these stations, we are building them as fast as we can. They take time to build as well.

**Programme host :**

Why do you have to get the support of the industry or the taxi industry ? Why can't the Government just tell them they are going to have to change ?

**Mr Robert LAW :**

Well, I would love to do that. Last time we tried that and we didn't get the support of the Legislative Council for the legislation.

**Programme host :**

So, the legislators were letting you down ?

**Mr Robert LAW :**

Well, certainly the last time. We have their support this time, but I am afraid that the technology that we are having to use takes time. We have to bring in special LPG vehicles, we have to get filling stations, etc, as I have mentioned before.

**Programme host :**

Is it reluctant support from the legislators ?

***Mr Robert LAW :***

I don't think it is reluctance this time. I think, probably, the difficulty was that the last time when we were warning them of the difficulties we were going to have with the air pollution problems, they were not so self-evident. This time it is there for everyone to see with the haze, and everyone is noticing at the moment. But I would like to make one other comment. We are able to deal with the situation on our own doorsteps through these measures. But if you travel between here and Guangzhou today, you will find that it is just as hazy all the way to Guangzhou. There is a quite a serious regional air pollution problem that has now developed, and we need to work with our counterparts in Guangdong to help resolve that as well.

***Programme host :***

It seems there is plenty of exchanges between you and your counterparts but very little action.

***Mr Robert LAW :***

Well, again, I am afraid there is no quick magic fix to this. Economic development tends to mean a lot more vehicles on the road, a lot more factories and that means a lot more pollution. Just the same as it is in Hong Kong, as our economy has grown, we are producing more waste. They are experiencing exactly the same problems.

***Programme host :***

And producing more children who have suffered from breathing difficulties, elderly people having to put up with this pollution, and therefore the resultant strain on medical and health services.

***Mr Robert LAW :***

That's right. But one other point I would like to make, and this might be surprising to you. Whilst we have got some quite obvious significant air pollution problems here, there are many different types of air pollutants and the ones that we suffer from here most often have to be quite visible. But many other major cities in the world, including London and New York, have got higher levels of certain air pollutants than we have. It's just that those forms of air pollution are not so visible.

***Programme host :***

But we are a pretty small place, something like seven million people, it would not be too difficult perhaps to prevent cars from coming into the busy areas, for example, by not allowing any cars with odd numbers at the end of their license plates to enter on certain days of the week, something like that.

**Mr Robert LAW :**

Well, that have certainly been done in some cities in the world when the air pollution level gets to the danger level. We haven't actually reached that position yet.

**Programme host :**

Why don't we stop it before it gets to that level ?

**Mr Robert LAW :**

Well, that's certainly something for our transport colleagues to think about. But, as I say, we certainly haven't got anywhere near to the danger level yet.

**Programme host :**

Do you press your transport colleagues to perhaps re-think this whole thing ?

**Mr Robert LAW :**

We are working with our transport colleagues on a number of initiatives, including the pedestrianization scheme that the Chief Executive announced late last year, and they are pressing ahead with those as quickly as they can get them in place.

**Programme host :**

Mr LAW, thank you very much indeed.

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**REDUCTION OF EMISSIONS FROM DIESEL VEHICLES**

***MRS MIRIAM LAU to move the following motion:***

"That this Council supports that measures be taken to reduce emissions from diesel vehicles, but as both petrol and diesel vehicles attribute to air pollution and before it can be confirmed which one of the two types of vehicle is more environment-friendly, urges the Government to review the mandatory scheme of phasing out diesel vehicles of four tonnes or below in the consultation paper "Further Proposals to Reduce Emissions from Diesel Vehicles" and to replace the proposed scheme with incentive measures to attract owners of diesel vehicles to change to petrol vehicles on a voluntarily basis, as well as to expeditiously explore other measures which are more effective and generally accepted by the public, in order to improve the air quality in the territory."

**MRS MIRIAM LAU** (in Cantonese): Mr President, I move the motion standing in my name as set out in the Order Paper.

In September this year, the Government published a consultation paper which proposes the diesel-to-petrol scheme offering concessions to the trade in order to encourage operators of diesel vehicles of four tonnes or below to switch to petrol. Apart from that, stringent emissions controls against heavy diesel vehicles will be exercised. It is considered that the public and the trade would welcome the Government's endeavours to improve air quality, to protect the public health and to cope with the loss that the operators of diesel vehicles may suffer under this scheme, but ever since the commencement of the consultation period has begun, different opinions have been aired and no unanimous conclusion could be drawn. What is more, voices of opposition from the affected trade is lingering in our ears.

The ultimate purpose of my motion today is the in line with the Government's objective, that is, to improve the air quality of Hong Kong and to protect public health.

The Government has been warning that the respirable suspended particulates (RSP) emitted by vehicles running on diesel is often exceeding the acceptable level and RSP may lead to various kinds of respiratory illnesses and even cancer. The Government also quoted a report from a United Kingdom newspaper that the RSP has caused death of tens of thousand of people a year. It seems to imply that those who do not support the Government's proposal should be held responsible for the death of these people.

In fact, the RSP is only one of the numerous harmful substances emitted by vehicles. Emissions by diesel vehicles contain more particulates and nitrogen oxides, while emissions by vehicles running on petrol contain more carbon monoxide, carbon dioxide, and benzene, which may cause cancer. Since the diesel vehicles and petrol vehicles emit different pollutants which are harmful to the environment and posing a health hazard to us, some academics find that there is no clear conclusion whether diesel or petrol is more environmental friendly.

However, it is the Government's foregone conclusion that petrol is more environmental friendly than diesel. The Government admits that by switching to petrol harmful pollutants in the air will increase but insists that such pollutants can be kept at a safety level. Unfortunately, apart from some homemade charts explaining the Government's views, there is no further substantiation such as academic report and research literature to support its argument or to rebut the academics' conclusion drawn from their study.

If other pollutants are ignored and only suspended particulates are the only pollutant to be dealt with, the Government can feel justified and confident to target at diesel vehicles. However, according to a research report by the Hong Kong Polytechnic University, the emissions of taxis and public light buses in the busiest areas only account for 23.5% of the particulates found in those areas. Besides, according to another research

report by the Hong Kong University, particulates emitted by heavy vehicles and big buses account for a great proportion while particulates emitted by taxis and small buses only account for a small proportion.

These two research reports have coincidentally pointed out that the main culprit of emitting a large amount of particulates is not taxis, small buses or light diesel vehicles. However, the Government is targeting at diesel vehicles of four tonnes or below and force them to switch to petrol. What the Government is doing is obviously putting the cart before the horse and reflects that it lacks a sense of proportion.

Even though the Government's proposal can really lead to reduction of suspended particulates in the air, can the people breathe fresh air once the proposal is implemented? Certainly not, because when the problem of suspended particulates has been solved, another pollution problem will emerge. After the diesel vehicles have switched to petrol, the number of cars running on the road will not decrease. In the future, there will be the same number of petrol vehicles running the same mileage that the diesel vehicles are now running. Harmful emissions will also be produced by these vehicles. If suspended particulates may cause death, carbon monoxide and benzene are also lethal, though the cause of death is different.

The Government has emphasized time and again that all problems can be resolved once petrol vehicles are fitted with catalytic converters. But will all pollutants emitted by petrol vehicles disappear? Certainly not. The Government also admits that some air pollutants will increase, but nevertheless will be kept within the safety level. Although mandatory renewal of catalytic converters will be part of the Government's proposal, no one can guarantee that catalytic converters will not be out of order. Neither is there any research to show that the performance of catalytic converters will not be affected even after they have become worn out. If the catalytic converters do not perform satisfactorily or if it has totally failed, the harmful emissions produced by petrol vehicles will be more lethal than the emissions produced by diesel vehicles as the former can kill without any trace.

Mr President, the Government has proposed fuel duty concessions, reduction of the annual licence fees for vehicles and the first registration tax in order to lower the operating costs of the taxis, public light buses and small school buses. Yet these concessions are provided only during the first 10 years.

Under the veil of concessions in order to attract the taxis and public light buses to switch to petrol, these are in fact mandatory measures which induce the drivers into a snare who will then find themselves reap the benefits first and then bear the hardships later. Like it or not, the diesel vehicle owners have to switch to petrol as soon as possible, otherwise, they have to bear a substantial increase in licence fees. Operators of light vans will suffer most because they will not enjoy any concession as the Government is of the opinion that these operators can absorb the extra cost with their clients and fuel constitutes a small proportion of transport costs. I really cannot understand the logic behind the Government's argument. Taxis and public light buses can enjoy concessions so that their customers, that is the passengers, can benefit, but the clients of the light vans cannot. In fact, not all light vans are owned by large companies, most of the light van owners are self-employed. The current proposal of the Government will directly affect their livelihood.

On the other hand, the Government does not agree that increase in the annual licence fee for vehicles which continue to stay on diesel is a punitive measure. It said that it was necessary to raise the operating costs of the diesel vehicles in order to be fair to other vehicles which have switched to petrol. The Government's argument is just like saying that if A is robbed of \$10, then B must be robbed of \$10 in order to be fair to A. This is a novel sort of "fairness" put forth by the Government.

Obviously what the Government is going to provide is not real concessions. The diesel vehicle owners now pay less fuel duty, which will be increased by the Government in the future. The Government will not incur any fiscal loss but the public will suffer when the concession period is over in 10 years' time, operating costs of petrol vehicles will increase as fuel duty also increases. Eventually the extra

cost will be shifted onto the commuters who have to pay a fare higher than that of other public transport running on diesel.

The public do not mind paying higher fare in order to enjoy fresher air. But if the fare increase is not as moderate as the Government has estimated and the fuel is not as environmental friendly as the Government has expected, will the public be willing to support an expensive but not effective scheme?

In regard to the operating costs, which include both the costs of maintenance and fuel, of taxis and public light buses running on petrol, there are discrepancies between the estimation by the Government and by the trade. If the trade's estimation is correct, then the current proposal of the Government will indeed deal a heavy blow to the trade and jeopardize the future development of the trade.

The trade is worried that after switching to petrol, the performance of the vehicles will be worse than diesel vehicles and will no longer suitable to the road situation in Hong Kong. Despite that, the Government points out that in many American cities such as New York, petrol taxis run a longer mileage than Hong Kong taxis. It further argues that as taxis in these foreign countries can run on petrol, there is no reason why it is not feasible in Hong Kong.

I would like to ask the Government some questions: Are taxis in Hong Kong operated in the same way as the taxis in New York? Are the road situations in these two cities the same? Do they have the same climate and geographical environment? If the answer is no, how can the Government conclude that the foreign model can apply to Hong Kong? Since there are discrepancies between the estimated operating costs presented by the trade and the Government's estimate, and the foreign model may not be applicable to Hong Kong, why not the Government conduct an experiment to compare the performance of a diesel taxi and a petrol taxi. Only in so doing will the data obtained can truly reflect the discrepancies in operating costs by running on diesel and petrol and prove that the fare increase will be as moderate as the Government has expected. Most importantly, we have to obtain data which are acceptable and

trusted by the public and the trade.

Mr President, as I have raised so many questions on the effectiveness of the Government's proposal, this may lead some to query whether I am urging the Government to stop doing anything and allow the worsening of our air quality. Certainly not. I must reiterate that I share the objective of the Government and the environmentalists: to show our determination to improve the air quality by our acts.

The current proposal put forth by the Government is exactly what Dr BARRON of the Hong Kong University has suggested. He recommends that all light vehicles should run on petrol and tighter emission controls and testing should be imposed on heavy vehicles. However, Dr BARRON also agrees that there is another alternative as suggested by Dr RUSCO and Dr WALLS of the Hong Kong University: to use high quality diesel and upgrade the emission standard of new vehicles. In addition, maintenance should be upgraded in order to reduce the amount of pollutants, including suspended particulates, emitted by all diesel vehicles. Dr RUSCO and Dr WALLS are of the opinion that their suggestion is more effective but less expensive than Dr BARRON's.

Thus we are facing many alternatives rather than either "death" or the Government's proposal as it warns. In fact, we do not come to the end of a blind alley, for there are many viable routes to take.

According to a research conducted by the Hong Kong Polytechnic University, if all taxis and public light buses have switched to petrol, the total amount of suspended particulates and RSP will be reduced by 12% and 18%. However, if low pollution diesel is used, the respective figures will be 8% to 10% and 12% to 15%.

The report by Dr RUSCO and Dr WALLS also points out that by switching to quality diesel of low sulphur content, emissions will be reduced by 25%, and the particulates and nitrogen oxides emitted will be

reduced by 22.5% and 21.7% respectively. A report by the Hong Kong University of Science and Technology has quoted an overseas experiment result that a 0.25% to 0.05% reduction in sulphur content will lead to 70% reduction in suspended particulates emitted.

It is clear that the use of low sulphur content diesel will reduce the emissions of diesel vehicles, including suspended particulates. Moreover, we will get an instantaneous and overall improvement in air quality. In fact, the Government has planned to introduce 0.05% sulphur content diesel in April 1997 and the effect is yet to be seen. But now the Government is trying to implement a costly but ineffective policy. It is hardly convincing. In fact, what the Government should do now is to introduce low sulphur content diesel at an earlier date and further lower the sulphur content of diesel.

The use of low sulphur content diesel should be accompanied by a proper testing and maintenance scheme in order to ensure that emissions by diesel vehicles do not exceed the standard required. As early as 1991, Dr BARRON pointed out that the root of air pollution in Hong Kong is that no one can guarantee that the engine of diesel vehicles are correctly tuned. Although the problem has been highlighted, what has the Government done in this aspect? Has it provided any maintenance guideline or standard to the trade? Has it adopted any measure to prevent the mechanical parts responsible for the emission from being tuned arbitrarily? The Government emphasizes time and again that no regulatory authorities in the world can develop an effective maintenance programme for the light diesel vehicles and that as there is no effective maintenance programme, the ban on diesel will be the only prudential policy.

The Government's policy is somewhat like trimming the toes to fit the shoes. It shows that the Government is both incompetent and ignorant. I want to point out that in many states of the United States, various kinds of testing or maintenance schemes are in place. A research on light diesel vehicles has been carried out in Colorado which shows that effective testing and repairs will reduce the amount of

particulates by 31%. Although these schemes may not be totally applicable to Hong Kong, they are at least important consideration before we can come up with any testing and repairs scheme applicable to Hong Kong. Unfortunately, we do not see any effort exerted by the Government in this aspect.

Mr President, I think the Government is aware that only diesel vehicles in bad repairs will lead to serious pollution problem. Why not examine the problem and formulate some stringent measures to compel proper testing and repairs rather than turning a blind eye to the installation of sub-standard spare parts in the diesel vehicles and the arbitrary tuning of oil pump of the diesel vehicles? Now the trade has proposed a repairs and maintenance scheme for the emission system in order to upgrade and tighten the repairs standard, which will also completely eradicate arbitrary tuning. Unfortunately, the Government thinks that it is not worth considering and insists its "clean-cut" approach, that is to eliminate all diesel vehicles of four tonnes and below. Other than that, no suggestion is accepted. Is this fair to the trade which is sincerely offering help to improve the air quality?

Finally, I would like to point out that the Government should review the proposed concessions and put forth real concessions rather than disguised ones. If the concessions are genuine, does it have to worry that the car owners are reluctant to switch to petrol? If some car owners voluntarily switch to petrol, the amount of suspended particulates emitted will be reduced to a certain extent. However, as not all fleets for business operation are forced to switch to petrol, our worry about emissions by petrol vehicles will be alleviated.

The suspended particulates emitted by diesel vehicles will be greatly reduced if multi-measures are adopted at the same time. These include the use of low sulphur content diesel, the implementation of stringent testing and repairs scheme, a voluntary diesel-to petrol concession scheme, as well as the tightening of the emission standard proposed by the Government. Furthermore, it will effectively reduce the amount of the other pollutants emitted by diesel vehicles. In the long term, the Government should proactively consider the use of other fuels, such as natural gas or LPG, which have been proved to be more

environmental friendly.

Mr President, the Honourable IP Kwok-him, at the joint meeting of the Panel on Environmental Affairs and the Panel on Transport, described the diesel-to-petrol scheme as somewhat like "resisting a tiger at the front door but letting a wolf creep in from the rear door". However, the Government thinks that they are not only resisting a tiger and a wolf but also bringing in a tame cat. I hope the Government will not be over-excited and open the door too early before it has confirmed that it is really a cat and not in fact a leopard.

Mr President, with these remarks, I beg to move.

*Question on the motion proposed.*

**PRESIDENT:** Miss Christine LOH has given notice to move an amendment to the motion. Miss LOH's amendment has been printed on the Order Paper and circularized to Members. I propose to call on her to speak and to move her amendment now so that Members may debate the motion and the amendment together.

***MISS CHRISTINE LOH's amendment to MRS MIRIAM LAU's motion:***

"To delete "but as both petrol and diesel vehicles attribute to air pollution and before it can be confirmed which one of the two types of vehicle is more environment-friendly," and substitute with "and"; to insert "public response to" after "the Administration to review"; to delete the word "mandatory"; to delete "replace" and substitute with "amend"; to delete "with incentive measures to attract owners of diesel vehicles to change to petrol vehicles on a voluntarily basis, as well as to expeditiously" and substitute with "to make it as widely acceptable as possible to the public and owners of diesel vehicles, including reconsideration of the proposed

principle of revenue neutrality by agreeing to plough back any possible revenue so acquired into health care development and, to continue to"; and to delete "which are more effective and generally accepted by the public,"."

**MISS CHRISTINE LOH:** Mr President, I move that Mrs Miriam LAU's motion be amended as set out under my name in the Order Paper. I want to explain, first of all, why I am seeking an amendment to Mrs LAU's motion.

I believe Mrs LAU has based her motion on the wrong premise. The motion states that "both petrol and diesel vehicles attribute to air pollution". No problems there. But the motion goes on to say that "before it can be confirmed which one of the two types of vehicle is more environmentally-friendly", the Administration should not insist on a mandatory scheme to switch from diesel to petrol vehicles.

You could say that neither of the vehicle types are environmentally-friendly since they both emit harmful pollutants. Further, the exhaust compositions of the two types of vehicles are inherently different. Thus, to phrase the motion in terms of their comparative environmental-friendliness is misguided.

A more useful focus for this Council to assess the public health benefits of the proposed scheme, is the Air Quality Objectives which Hong Kong has set for itself. Regrettably, our air quality is consistently failing to meet them, especially for respirable suspended particulates (RSP). It is not in dispute that the adverse health effects of RSP include serious respiratory and cardiovascular illnesses, with the elderly and children being the most susceptible. Recent international studies show that RSP may be the most worrisome air pollutant in the urban environment.

The biggest culprit for the emission of RSP right now in Hong Kong is the diesel fleet. The Hong Kong Polytechnic University study, commissioned by the Taxis and Public Light Buses Concern Committee, does not actually dispute this.

What is surprising about the study, is that it does not point out the obvious, that is, that RSP is the pollutant that consistently, and by a large margin, fails the Air Quality Objectives. I am mystified why the study spends 40 pages on air pollution and vehicle emissions and skirts around the issue of the Air Quality Objectives? Furthermore, the study does not tell us by how much our air quality will improve if Hong Kong does as it suggests by adopting a better maintenance scheme for small diesel vehicles, and drop the proposed diesel to petrol scheme. This is surely, Mr President, a significant and an incomprehensible omission.

Mr President, there should be no dispute that RSP is the single greatest air pollution threat to public health today in Hong Kong. Thus, there should be no dispute that we need to address RSP urgently and reliably.

It is for this reason, urgency and reliability, that Hong Kong cannot wait for developing technologies, such as electric vehicles, to mature. The proposed diesel to petrol switch is underpinned by reliable technology. There is enough data both here in Hong Kong and around the world to assure us of the levels of improvement to our air quality that we can expect if the scheme were implemented.

I would only like to say that if the Administration gets to the state of drafting legislation, it should include in it periodic review to ensure that developing technologies will not be overlooked or discounted in future by Hong Kong having opted for the diesel to petrol switch scheme today.

In addition, since the scheme targets diesel vehicles below four tonnes, which causes the greatest air pollution in Hong Kong's most densely populated areas, the Administration must also continue to tighten control over larger diesel vehicles. Moreover, the Administration must do more to reduce nitrogen dioxide which also exceed the Air Quality Objectives. However, these are not reasons for holding back on the scheme overall.

Mr President, the rest of Mrs LAU's motion, which calls for the scheme to be a voluntary one, is hinged on the logic of comparative environmental-friendliness, which I hope to have shown is erroneous.

What my amendment proposes is simply that the Administration should review public responses to the scheme, which would of course include the views of the taxi and public light bus trade and those of other like vehicles, and to make the scheme "as widely acceptable as possible" to them and to the public.

The Environmental Affairs and the Transport Panels held two long unprecedented meetings to discuss with the trade and with government officials the two main issues of the proposed scheme. The first is on health, which I have already dealt with. The second one is the financial viability of the scheme.

In this regard, the calculations upon which the Administration based its various concessions to promote the scheme, and to ensure that the livelihood of the trade will not be adversely affected, are very different from those presented by the trade. I have already publicly criticized the Administration before for not consulting the trade prior to the publication of its consultation paper. If the Administration cannot come to some agreement with the trade on them, then the scheme will not succeed, whether it be a mandatory or a voluntary one.

The Administration's response to the lack of prior consultation is that it would not have been able to get the consultation paper out on time. The Administration wants to only consult the trade now. The problem here is that the Administration has lost the trust of the trade, whose co-operation is crucial for the success of the scheme.

I would also like to call on the trade to now sit down however with the Administration to compare their calculations. The Administration should give an unequivocal undertaking here that if its calculations are wrong, that it will review the various concessions to ensure that the livelihood of the trade will not suffer.

The last point I want to make is on the issue of revenue neutrality. The Administration advises that its initial revenue loss in implementing the various concessions is expected to be around \$485 million in the first five years. But since petrol consumption will correspondingly increase, that will create a surplus of about the same amount.

Mr President, if the Administration has to increase its concessions to make the scheme work, then I suppose there could well be a revenue loss. This prospect should not, however, hold the Administration back since public health is imperative.

At the other end of the spectrum, it could be that the Administration would end up making some sort of a greater surplus than they have calculated for. If that were the case, then what I propose in my amendment is that the revenue should be plowed back into health care development preferably, directly to deal with the air pollution.

Mr President, I urge Members to support my amendment.

*Question on the amendment proposed.*

**MRS SELINA CHOW** (in Cantonese): Mr President, I believe every one of us looks forward to an environment with fresh air and a wholesome body. Unfortunately, modernization brings only materialistic improvements. The quality of life has, however, deteriorated. This is due to the worsening problem of environmental pollution, a topic we are debating today. Therefore, I am in full support of tackling the problem of car emissions. Nevertheless, I must ask: Do we need to hastily propose, as the Government does, draconian measures to lay down rules to make it mandatory for vehicles to use of petrol in place of diesel?

Who should be responsible for the present problems? The culprit could be those owners of smoky cars who never keep their cars in good repair. The Government is in fact the accomplice, guilty of laxity in law

enforcement. It has failed to set up a mechanism to ensure that cars on the roads are adequately maintained and overhauled to meet environmental requirements.

From the point of view of environmental protection, the Environmental Protection Department (EPD) has never in the past done anything concrete to reduce the amount of respirable suspended particulates (RSP) in car emissions. Just take a look at the chart given to us by the EPD the day before yesterday and we can see that if the Government had adopted the proposed administrative controls, the RSP pollution index could have been lowered by 20%, even in the absence of any diesel-to-petrol conversion measures. How come the Government did not take any action in the past but in the face of a worsened situation, it has now decided to take drastic measures to ban the use of diesel?

Why does the Government have to wait until 1997 to introduce a reduced sulphur content of 0.05% in diesel when most places in the world have already adopted the same? Furthermore, while some foreign countries are already exploring the possibility of further reducing the sulphur content of 0.01%, why does Hong Kong appear to have lagged behind in this regard? How come Hong Kong continues to tolerate a high level of sulphur content while at the same time tries to take on an avant-garde position by banning the use of diesel oil?

Now that the RSP pollution index may be reduced by 20% through administrative control, has the EPD ever tried to find out how to further improve this percentage?

Mr President, in the course of this Council considering the Government's proposed diesel-to-petrol scheme, I have queried the relevant departments for going to the abstruse and forgetting the obvious. When the relevant Panel discussed the proposal, the Government obviously had not taken practical measures to improve vehicle emission standards, to introduce suitable maintenance requirements or to prosecute the polluters. Nor had it assessed the effectiveness of all of these steps

to ascertain whether they can solve most of the problems. The Government started to make comparisons only when Members insisted that it did so. Is this not an obvious instance of lacking in objectivity and a sense of priority on the part of the Government?

The Honourable Mrs Miriam LAU has pointed out clearly the views of the trade on the proposal and she has even analysed such views from an economic angle. In terms of attitude, I am very much dissatisfied with the position held by the Transport Department (TD) in conducting the consultation. I am more so with the fact that this time Members were obviously swamped with numerous data from the TD and from the trade. Members were therefore at a loss as to who to believe although they could in fact have been able to obtain objective data in considering the relevant policy. The Government could say the data from the trade are for its own interests. But are the data from the TD and EPD not geared to give support to the Government policy? To maintain its credibility, the Government has to be fair and neutral and it has to tell the truth. If the TD finds some part of the data provided by the trade hard to understand, it should spend some time to discuss with the trade in a patient manner in order to unearth some trustworthy data for Members to look at before they make a decision.

Without having done its part, the Government hurried to put forward a strongly worded proposal in its present form. This is an ostrich policy, or rather this is like furthering self-interest by hurting others, which, I think, is a more appropriate phrase to use.

Even if the Government opines that petrol causes less pollution than diesel, it should not impose control with means harsher than is necessary. As the saying goes, tyranny is fiercer than a tiger. Draconian measures can only make residents lose faith. We could borrow the experience from the introduction of unleaded petrol. The Government promoted the product and encouraged car owners to use it. Why do diesel car owners have to be penalized when it comes to the question of diesel-to-petrol switch? I understand most diesel cars are put to commercial use, but this should not be a reason to reward car

owners in one situation but penalize them in the other.

Mr President, I would like to say a few words on the Honourable Miss Christine LOH's amendment. If she had such high ideals, why did she not urge the Government to make it mandatory for residents to stop using diesel vehicles and petrol vehicles, and to introduce a full scale use of electric vehicles, as this best protects the environment? Nevertheless, I do not think Members can represent all environmentalists. I can tell everyone that I talked to some rather authoritative persons from the Friends of the Earth about the issue. Some of them said that proper maintenance of diesel vehicles could solve all the problems, and that if there were no proper maintenance, even petrol vehicles could cause more severe problems.

So, Mr President, I am in full opposition to the Government's proposal to jump to the enforcement of a policy that is far from being convincing or acceptable.

**MR LEUNG YIU-CHUNG** (in Cantonese): Mr President, there have been a number of "expert encounters" in the Legislative Council a short while ago. This morning, we had a discussion on whether electromagnetic fields would affect our health. Now, we talk about whether it is diesel or petrol that does the most damage to our health. In both debates, numerous expert reports and research data were involved which stun the general public. Nevertheless, all these show that people are concerned about environmental protection, and that is a promising social phenomenon. But there is an interesting point to note among all these "expert encounters". In the discussion this morning on the laying of power cables by China Light and Power Company in the vicinity of residential units, the Government held that there was no conclusion among experts on the matter and hence the local residents' worries were an over-reaction. The Government's position was an apathetic one. It even stressed that it would allow power cables to be laid near housing units. However, on the matter of diesel-to-petrol switch, the Government has made an about-turn. It showed great concern for the

health of the general public by adopting draconian measures to force people to comply with the standards set by Government experts. Owing to these completely different positions taken by the Government, one cannot help thinking that the Government is having a split personality.

No matter whether the Hong Kong Government has some mental problems or not, these "expert encounters" clearly demonstrate that the Government consistently tries to "pre-empt" and high-handedly forces people to accept proposals that are not yet scientifically conclusive. The Government only chooses to implement policies beneficial to itself and manages to diminish the responsibilities it needs to shoulder, in the name of environmental protection.

In the current debate on the diesel-to-petrol scheme, the Government has, in its consultation paper, centred its discussion only around respirable suspended particulates (RSP) released from diesel fuel combustion. As regards toxic or carcinogenous substances such as carbon monoxide, nitrogen oxides and benzene released from petrol combustion, the Government has either avoided or just briefly mentioned the consequences or harm caused by these substances. The Government has even publicly indicated that in order to abate the harm caused by RSP, it is prepared to accept the intensifying green-house effect caused by carbon dioxide released from petrol combustion, that is, it is oblivious of the consequences brought about by melting glaciers on the human race and the world. This is unacceptable.

Nonetheless, the Government's high-handedness in executing imprudent policies has proved effective on certain short-sighted parties. Already, some environmental protection groups have indicated that they will be agreeing to the policy of a compulsory diesel-to-petrol switch in view of the fact that the Government will not be considering other ways to improve the environment in the next 10 years. But I should point out to the Government that a forced implementation of its policies may not bring about any desirable results. As the consultation paper also underestimated the impact of the diesel-to-petrol policy on people's livelihood, lots of organizations in the trade, including minibuss drivers, taxi drivers and van drivers have recently accused the Government of

working behind closed doors and divorcing itself from reality. They also accused the Government of having lost sight of the possible consequences arising from the implementation of the policy. In fact, basically it is those above-mentioned drivers who will be affected by the diesel-to-petrol scheme. Vehicles driven by these drivers are closely linked to the general public. Hence, whatever effects arising will eventually be shifted to the general public. One of the effects would be that the operating costs of vans will be shifted to the currently ailing medium and small enterprises, thereby further impeding the Hong Kong economy.

Mr President, I do believe everyone in the world wants to live in a healthy, happy, fresh and clean environment. However, in implementing environmental protection policies, we must not lose sight of people's livelihood. We must not work our way through compulsory means. If we do, policies with good intentions will at the end of the day become disruptive or even oppressive. This would be very much against the principles of environmental protection. Eventually, we would become rash environmentalists or hypocritical ones. This is the last thing we want to see.

Mr President, we are not in a position to take part in these "expert encounters". Since some experts think it is one entirely impossible to control pollutants emitted from the use of diesel fuel, why do we not step up the examination of vehicles or control the import of cars? At the same time, many experts hold that we may explore and develop a variety of alternative fuels to take the place of existing fuels such as petrol or diesel, which contain pollutants. Some such possibilities are liquefied petroleum gas and natural gas. Why does the Government not do that? Why does the Government not carefully consider development in this direction in the consultation document? Why does it just force us to accept the diesel-to-petrol policy? Lastly, Mr President, I do hope the Government can pay attention to people's livelihood and to society at the same time as it promotes environmental improvement. I hope the Government will not enforce this as a mandatory policy as it will have a direct impact on the general public.

These are my remarks.

**MR IP KWOK-HIM** (in Cantonese): Mr President, I am very pleased with the Government's effort in trying to minimize the emissions from diesel vehicles. Since 1992, the Government has introduced unleaded petrol and environmentally-friendly car-engines. These actions have positive effects on protecting the environment and should be recognized as such. However, the Government's proposal to make it compulsory for vehicles to switch from diesel to petrol is open to question.

First, the Government is of the opinion that petrol causes less car exhaust and hence less pollution than diesel. Whether this is really the case has yet to be confirmed. Undeniably, diesel vehicles will emit large amounts of respirable suspended particulates (RSP). A lot of researches done locally and overseas have demonstrated that breathing in RSP may result in a number of diseases such as chronic bronchitis, asthma, heart diseases and cancer. Nevertheless, petrol vehicles will also emit toxic gases such as carbon monoxide (CO), nitrogen oxides (NOX) and hydrocarbons (HC). These gases may cause leukaemia, anaemia and so on and depletion to the ozone layer. They may also cause the temperature to rise and produce a green-house effect. So they pollute the environment. In addition, emissions from diesel vehicles are visible whereas those from petrol ones are not. Invisible emissions are very dangerous as people may have inhaled them without knowing it. To replace one type of toxic gas with another is an action without careful consideration. Today, when the amount of RSP in the air increases, we demand that vehicles switch to petrol. Later, when the amount of CO in the air increases, do we need to switch to yet another type of fuel? Therefore, the best thing to do to improve the Hong Kong environment is for the Government to conduct another thorough and comprehensive research involving a comparison of the relative impacts of the use of petrol and diesel on our air quality so that the public know exactly what is the best thing to do for the environment.

Second, the Government wants to gradually phase out diesel vehicles of four tonnes or less, that cover taxis, minibuses and light goods

vehicles. However, taxis and minibuses account for only 15% of all diesel vehicles in Hong Kong and they are responsible for only 5.7% of the emissions. Among all diesel vehicles, only one-tenth are light goods vehicles. Can phasing them out really improve air quality in Hong Kong? But then the Government allows medium and large diesel vehicles of four tonnes or more to continue to use diesel after installing catalytic converters when RSP emitted by medium and heavy vehicles account for a quarter of the RSP emitted by all diesel vehicles and those emitted by large buses account for 14%. Can we actually achieve the "ideal" objective of environmental protection simply by requesting vehicles of four tonnes or below to switch to petrol?

Undeniably, a switch of fuel or the installation of catalytic converters may drastically reduce the amount of RSP in the air within a short time. The situation will however deteriorate if vehicles lack sufficient maintenance as the amount of RSP emitted by diesel vehicles will increase with time due to natural wear and tear. Most car-owners will not carry out periodic maintenance or checks on their cars in view of the high costs involved. Petrol vehicles exhibit marked depletions in its power and functions if no proper maintenance is provided. So, although the Government euphemistically says the switch is meant to compel car-owners to periodically check their cars, the fact remains that the switch increases the financial burden on car-owners. Unfortunately, the quality of current car maintenance in Hong Kong leaves much to be desired. Owing to insufficient Government supervision, many service centres either fail to conduct maintenance work according to procedures specified by the manufacturers or use spare parts not supplied by the original manufacturers. Since maintenance is problematic in terms of quality, it is extremely doubtful whether the installation of catalytic converters on medium to large diesel vehicles can in the long run curb pollution.

Furthermore, taxes levied on petrol vehicles are heavier than those levied on diesel ones. The switch to petrol vehicles will undoubtedly increase the operating costs of taxis, minibuses and light goods vehicles. Although the Government will implement relevant concessions to reduce the fuel tax, licence fees and First Registration Tax to make up for losses sustained by the trade, these concessions will diminish year by year. It

is estimated that taxis and minibuses will start to suffer losses from the fourth year on. In addition, maintenance costs for diesel vehicles are high. Private operators will find it difficult to break-even and will resort to increasing fares. It is the general public who ultimately suffer.

Mr President, although the distribution of RSP in Hong Kong is becoming worrying, the air quality reports released by the Government daily tell people that the air quality is still good. So, before a detailed report on the use of petrol and diesel is available, the Government should not hastily implement the relevant policy. After all, to substitute petrol for diesel cannot be a long-term means to improve the environment. To my mind, the present Government proposal to use petrol to take the place of diesel is just a decoy that succeeds in fending off one danger only to fall prey to another. That decoy would not succeed in improving our environment effectively. I sincerely hope that the Government will adopt something that truly benefits the people of Hong Kong.

The Honourable Miss Christine LOH has proposed to appropriate any revenue from the diesel-to-petrol switch scheme to the development of health care on the premise that there is neither revenue gain nor loss for the Government. My view on that proposal is that it contravenes the Government's stated fiscal principle of not specifying the use of any income from taxation.

These are my remarks.

**DR LEONG CHE-HUNG:** Mr President, some time ago, the Administration put forth an air pollution index, analyzing and reporting the degree of air pollution in the different parts of this territory. At the same time, residents were advised to stay at home when the index reached a certain level. Yes, that may well be the best alternative as an immediate measure. The irony is that, instead of attempting to remove the root of pollution, the Government is proposing an impractical issue. Furthermore, it has produced the effect of "cry wolf".

Mr President, medical research and statistical data has shown conclusively that air pollution, in particular the presence of excessive

suspended particles, is harmful to the breathing apparatus in the lungs of human beings, and it will aggravate and accentuate breathing problems in people who have already had respiratory problems such as asthmatics and victims of pneumoconiosis. Any move, therefore, to effectively reduce respirable suspended particulates (RSP) will be very welcome by the medical profession that I represent.

It therefore came as an initial, and I said "initial", pleasant surprise when a consultation document, "Cleaner Air - Further Proposals to Reduce Emission from Diesel Vehicles", was published. Regrettably the pleasant surprise was only short-lived. The consultation document, with respect, is too simplistic, incomplete, superficial and one-sided. So, as a start we all agree that diesel is the main culprit of RSP. Yet I failed to identify in the consultation paper or otherwise, whether the Government has today done its best to control the RSP emission of those vehicles below four tonnes. Have motor vehicle manufacturers been approached on the availability of a diesel exhaust filter? Could more frequent vehicle inspections significantly reduce RSP? How often should such inspection be done before it is effective, taking into consideration the fact that these vehicles are almost certainly constantly on the road and whether such frequency of inspection is acceptable to the trade?

The consultation paper seeks to remove diesel vehicles below four tonnes from the roads, but it is lenient on the heavy-duty vehicles that actually represent more than 50% of the diesel road users on the grounds that most of such heavy vehicles belong to large organizations where proper maintenance could be available. But is this really true? In the last four months alone, there were already four reported incidents where the wheels of heavy-duty buses of three franchised bus companies were found to be improperly fixed, and had it not been for the swift action of the very conscientious drivers, major accidents and possible tragedies would have occurred.

Other than a few vague lines in the consultation paper, the Administration owes the public a concrete plan on how and when to tighten controls over these heavy-duty vehicles that no doubt contribute heavily to the pollution of our air. Repeatedly, the consultation paper

calls for the abolition of diesel vehicles to reduce the harmful health effect of RSP that these vehicles emit. This we in the medical profession support. Yet, by abolition of diesel, the recommendations replace with petrol engines. In no way has the paper nor the Administration informed the public of the possible harmful effects of the combustion of petrol, unleaded or otherwise, that they will bring. Are the carbon monoxide, hydro-carbons, nitrogen compounds that petrol vehicles emit harmful in other ways to health? Are we replacing a rotten orange with a rotten apple. Which is more harmful to health at the end of the day?

Mr President, it is an undeniable fact that diesel engines are much more economical in actual fuel consumption than petrol engines. Health aside, are we meeting the other principles of environmental objectives? Are we taking energy-sustainable development into consideration? Would the use of electric or LPG vehicles be more environmentally preserving? Should the whole package of environmental needs and objectives be taken and analyzed together for the benefit of Members of this Council and the public? The Administration must address all these queries and come out with a clear answer if it is genuine in its effort in controlling air pollution and to maintain the environmental sustainable development.

Finally, Mr President, while the whole consultation paper has based its action on health improvement, it has not submitted any concrete projection on reduction in diseases and thus estimated possible savings in health expenses. In this context, these figures must be available, not only as a means to indicate its cost-effectiveness but also as an indication of the Government's commitment to achieve certain health targets. In this context, it would only be right and fair to plough such savings back into public health and the medical field, and I so seek the Government's assurance, lest we wonder whether diesel-to-petrol proposals are for economic gain in the disguise of health and environmental protection.

Mr President, with respect, the motion and amendment before us

today did not seek to address all these satisfactorily or enough. While both the motion and the amendment agree that diesel engines are deleterious to health through air pollution, the only main aim of the motion is to call for the phasing out of diesel engines on a voluntary basis with no timeframe, while the amendment maintains that such phasing out should be done on a mandatory basis with a timeframe. It is very obvious that the motion speaks for the trade, that is, owners of taxis and public light buses, while the latter bases its argument entirely on an environmental protection basis.

Mr President, if we want to clean up our air, if we want to breathe clean air, if we want our next generation to decrease their rates of asthma and lung diseases, we need a timeframe to perform the necessary changes. Furthermore, Mr President, the medical profession urges that diesel to petrol should only be the first step and that we look forward to the Government to set a timeframe for other measures to clean up our air.

With these remarks and reservations, I support the amendment.

6.08 pm

**MR CHAN WING-CHAN** (in Cantonese): Mr President, the lack of quorum.

**PRESIDENT:** I order that the Council be counted.

**PRESIDENT:** I now suspend the sitting and summon Members to return to this Chamber.

*A quorum was then formed.*

**PRESIDENT:** Council shall resume now.

**MR AMBROSE LAU** (in Cantonese): Mr President, while Hong Kong is experiencing a depression, the Government has announced a series of proposals to eliminate light diesel vehicles under four tonnes on the ground that they will help clean the air. If implemented, the proposals will squander large amounts of resources and cause costs to increase. The increased costs will be shifted to the consumers. This will exacerbate inflation. Furthermore, as the measures contained in these proposals will make it impossible for diesel vehicles from China to enter Hong Kong, this will indirectly affect trade between China and Hong Kong.

Mr President, the relevant scheme was put forward hastily, as can be seen from three aspects:

First, up to now, it is still inconclusive whether diesel vehicles or petrol vehicles will cause more pollution and harm to human beings, despite years of expert research. Notwithstanding this, in the consultation paper, the Government only stresses the harm to the human body caused by respirable suspended particulates emitted by diesel vehicles but leaves out that caused by colourless and toxic gases emitted by petrol vehicles. In fact, toxic gases emitted from petrol vehicles can also cause harm to our brain cells; give rise to leukaemia, anaemia and tumour; and hinder our spinal vitality. Furthermore, petrol vehicles consume 30% more fuel than diesel ones. If vans, taxis and public light buses below four tonnes all switch to petrol, more fuel will be consumed and this will intensify air pollution. Regrettably, in the consultation paper this was avoided by the Government.

Second, the Government's proposal will squander large amounts of resources, increase costs and boost inflation. Take taxis as an example. At present the average daily diesel consumption costs about \$230. This amount will increase to \$540 if unleaded petrol is used. Other factors that have to be taken into consideration include charges for changing vehicles and parts, and the fact that petrol vehicles have shorter lives than diesel ones and, unlike diesel vehicles, cannot be operated 24 hours a day.

Petrol vehicles can only be operated for 10 hours or so a day. Furthermore, compared with diesel vehicles, petrol vehicles entail extremely expensive maintenance. Because of all these factors, it is estimated that the operating costs for taxis and public light buses in urban areas will surge, while the operating costs for vans will rise by at least 40%. Following the shifting of costs to the consumers by the concerned operators, bus fares and fares charged by the three railway companies will increase too. This domino effect will stimulate inflation, and affect the operating costs of all trades. Thus, consumer spending will shrink further.

Third, the scheme mentioned is not just a bone of contention between the Government and public light bus associations or taxi associations; nor is it purely an argument on scientific evidence, despite the fact that opposing views have been expressed by these associations and that different views have been presented by research reports produced by the Hong Kong Polytechnic University. The scheme is a matter of importance affecting the operating costs of tens of thousands of light diesel vehicles and the entire economy. Geographically, Hong Kong is close to the sea, and air spreads quickly. In fact, even some inland cities in Europe and the United States which value environmental protection have not put forward such proposals. The scheme will deal a heavy blow to the Hong Kong economy and increase the burden on the public. The Government, however, ignores this. It hurries to pre-empt by launching the scheme. This is unacceptable.

Mr President, as all trades are having a difficult time in their business operations, the Government ought to prudently lend them a helping hand rather than do anything harmful to the economy on the pretext of environmental protection. I would like to make several recommendations: First, the Government should make a full assessment of the negative effects the relevant scheme has on the economy of Hong Kong. Secondly, before any conclusion can be reached as to whether diesel or petrol is more harmful to the environment, the Government should be cautious in dealing with scientific evidence in support of the relevant proposals. Thirdly, a research should be conducted on the geographical environment and air quality index of Hong Kong to see if

there is a need to immediately replace diesel vehicles. Fourthly, the Government should study the possibility of using particulate separators to obviate the need to adopt the present proposals which may have far-reaching effects.

Mr President, these are my remarks.

**MR WONG WAI-YIN** (in Cantonese): Mr President, the Government published a consultation document last September in which it proposes to phase out over a period of five years all diesel vehicles of four tonnes and below and to adopt strict control measures with regard to emissions by the remaining larger-size diesel vehicles. In a number of joint meetings of the Legco Environmental Affairs Panel and the Transport Panel, officials from the Environmental Protection Department (EPD) did their best to explain to Members that the level of respirable suspended particulates (RSP) in Hong Kong's busy urban districts persistently exceeds the yearly air quality targets. The officials, citing the research findings of other countries, pointed out to us that RSP could heighten the death rate. The EPD repeatedly stressed that only by requiring diesel vehicles of four tonnes and below to switch to unleaded petrol and to install catalytic converters will it be possible to reduce the amount of RSP dispersed into the air so that it will conform to the air quality targets. Undeniably, the Government's proposal stems wholly from its concern for the health of Hong Kong people. Everybody has the obligation to protect the environment. To improve the air quality so as to ensure that Hong Kong people will live in a healthier environment is a task which falls squarely on the Government.

However, when we carefully scrutinize the contents of this scheme, we will find that the scheme will have a direct impact on the livelihoods of part of the population. It is because most of the diesel vehicles of four tonnes and below, targeted to be phased out, are vehicles for hire including taxis, public light buses (PLB), private school buses and light goods vehicles. The switch to petrol will raise the operating costs of these vehicles and directly affect the income of drivers and owners for the following reasons: the duty on petrol is higher than diesel; petrol vehicles

consume more fuel, petrol vehicles have a shorter life span; petrol vehicles need more intense maintenance. The Democratic Party fully understands the worries cherished by people within the trade about their future livelihoods. Therefore, we urge the Government, in considering the switch to petrol by diesel vehicles of four tonnes and below, to dispel the worries of the vehicle operators by attempting to strike a balance between environmental protection and the impact the scheme will have on these operators.

The Government stresses in the consultation document that the switch-to-petrol scheme will have only a minimal effect on the operating costs and livelihoods of the vehicle operators concerned and that there is no need for them to worry. However, in the last joint meeting of the Legco Environmental Affairs Panel and the Transport Panel, a Member asked the EPD if they had consulted the affected operators or organizations in the course of drawing up the scheme and drafting the consultation document. The reply from the EPD officials was that if consultation was carried out during the course of drafting there would be no way of knowing when this consultation document would be completed and ready for publication. The reply from the EPD officials would seem to imply that they had indeed expected strong opposition to the switch-to-petrol scheme from the vehicle operators concerned; they would not wish to consult the operators during the drafting process for fear that it would hold up or delay the drafting work. But if we accept the EPD's argument that the switch scheme would have only a minimal effect on the operators, I do not understand why the EPD should have been afraid to consult the operators prior to the drafting. Were they worried that their data and way of calculation would be subjected to query to such an extent that they would not be able to make an answer?

As a matter of fact, what the vehicle operators are most concerned with is the extent of the increase in operating costs after they switch to petrol. It is because the increase in operating costs will directly affect their net income. In the consultation document the authorities admit that assessment of the rise in operating costs has been based on overseas information and data supplied by vehicle manufacturers because there are at present no petrol-driven taxis or PLBs in Hong Kong. The question

before us now relates to the wide gap between the operators' assessment of operating costs for petrol vehicles and the Government's assessment. The operating costs as assessed by the operators are much higher than the Government's assessed costs. In the many joint meetings of the Legco Environmental Affairs Panel and the Transport Panel, the operators and the Government stood firm on their own respective assessments. Each side had an arguable case; each side maintained that they were experts in this regard. Few Members of this Council had the expertise to tell who was right and who was wrong. Therefore the Democratic Party hopes that government experts and vehicle operators will discard their hostile attitude towards each other and strive to reach a consensus. Failing which, this Council will not have sufficient grounds to support either side.

The Democratic Party in principle supports the diesel-to-petrol switch scheme. But it has not been proved conclusively that petrol vehicles are more environmentally friendly. This, coupled with the fact that the Government lacks substantive data in regard to petrol vehicles, means that it would seem risky, irrational and hasty to adopt the "broad-brush" approach of implementing a mandatory switch scheme. Therefore we think that now is not an opportune time to enact laws to effect a mandatory diesel-to-petrol switch. We hope the Government will introduce yet more attractive concessionary measures to induce diesel vehicle operators to switch to petrol. At the same time, the Government should observe for one year and on a test basis how petrol-driven taxis and PLBs will operate in order to understand the petrol vehicles' air polluting effect and their impact on the operating costs of the operators. And after that, the Government will formulate a long-term policy in this respect.

The consultation document further points out that to encourage light diesel vehicles to switch to unleaded petrol the Government will, during the 10-year switching period, introduce a series of financial measures which will let these vehicles, including taxis, PLBs and private school buses enjoy concessionary rates of fuel duty. Apart from private cars, all other light petrol vehicles can enjoy reductions in first registration tax and annual licence fees. Although the proposed scheme seems to incorporate an element of tax concession, yet the Government

will be able to balance expenditure and revenue in this respect in the tenth year. In other words, the scheme will not constitute a charge on government revenue in any way. Since the Government is of the view that this scheme must be implemented because of its salubrious effect on people's health, why is the Government reluctant to bear part of the costs but instead is asking the operators and passengers to bear them? The Democratic Party urges the Government to grant more concessions to vehicles which switch to petrol in order to induce more diesel vehicle owners to switch voluntarily to petrol. The Democratic Party suggests that the Government drop its proposal to cut the duty on petrol (including petrol duty for private cars) starting from the sixth year after implementation of the switch scheme. The Government should instead further cut the duty on petrol for petrol-driven taxis, PLBs and light buses and extend the concession years. This would enable owners of petrol-driven business vehicles to run their operations at costs lower than what would have been the case with diesel so that they would enjoy greater economic benefits. We hope the Government will carefully consider our suggestion.

During the consultation period, vehicle operators, environmental groups and Members of this Council have made submissions to the authorities with regard to this scheme. The Democratic Party hopes that the authorities will carefully deal with the suggestions from various quarters.

Thank you, Mr President.

**MR CHOY KAN-PUI** (in Cantonese): Mr President, every citizen wants to live in an environment with fresh air. Who would want to breathe in polluted air in the streets day-in, day-out? Everyone would like to see an improvement in air quality and a reduction in the level of pollution.

In Hong Kong, a major source of pollution can be traced to industry and cars. Car exhausts, in particular, are the major source of pollution. Both diesel and petrol vehicles can emit all sorts of toxic materials. Diesel vehicles emit large amounts of respirable suspended

particulates (RSP), affecting our respiratory system and our lung functions. Petrol vehicles, on the other hand, emit a lot more carbon monoxide and benzene. Benzene, which is carcinogenous, may impair our body co-ordination and is deleterious to pregnant women and those with heart and circulatory problems. So, both types of vehicles are harmful. But are the exhausts from diesel vehicles more harmful and polluting than those from petrol vehicles? Before a definite answer to this question can be found, it would be imprudent of the Government to implement the plan to gradually phase out diesel vehicles of four tonnes or less.

If, however, the plan is made mandatory, operators of taxis and minibuses would be among the hardest hit. The next group of people to suffer are citizens of Hong Kong, who are forced to face a price increase because cost increases in converting diesel vehicles into petrol ones will ultimately emerge as increased passenger fares. We all agree that pollution should be checked in order to protect our health. To achieve this end, why does the Government not consider strengthening vehicle inspection and maintenance? To do so will not necessarily involve government departments. The Government can in fact assign the job to authorized inspection and maintenance centres which are duly supervised. The Government can require vehicles which have been running on the roads for a certain number of years to undergo periodic inspection and to obtain certification before their licences are renewed.

As vehicles switch fuels, the Government has to provide three major preferential treatments as a matter of policy, namely, concessions on fuel duty, licence fees and first registration taxes. However, these are only short-term measures. In the long run, operating costs for taxis and minibuses will inevitably increase. According to the profit and loss account provided by a working committee of a taxi trade commission to oppose the conversion to petrol vehicles, the operating costs of each diesel taxi are much lower than those of their petrol counterpart. Items accounting for major increases are maintenance and depreciation rather than fuel costs. Who else but the consumers, that is, Hong Kong citizens are ultimately required to share the cost increases?

Furthermore, manufacturers of petrol vehicles are looking into ways and means of reducing the emission of particulates which cause air pollution. It is envisaged that five years later, engines of diesel vehicles will show great improvements in the light of the keen competition manufacturers need to face and the amazing pace at which technology advances.

Mr President, with these remarks, I support the original motion.

**MR CHAN WING-CHAN** (in Cantonese): Mr President, I believe most people understand very well that we should commit ourselves to protecting the environment and reducing pollution. On this premise, the Government recently proposed to control the emissions from diesel vehicles. I fully support the spirit of this proposal. However, the proposed measures suggest all diesel vehicles of four tonnes and below be replaced by petrol vehicles within five years. This is somewhat improper and the Government seems to be "doing a bad job with good intent".

There are two points contained in the Government's consultation paper:

1. diesel vehicles pollute the air more than petrol vehicles do;
2. concessionary measures will be introduced by the Government to attract petrol vehicles so as to bring the impact of the scheme on the drivers and the citizens to a minimum.

I have some reservations about the above two points. Regarding the first point, it seems that there is no sound data to support this viewpoint. The arguments as contained in the Government's study report and the opinions of some academics and experts are quite divided. I believe Members may have read through quite a lot of similar reports and research papers. The two sides hold fast to their own views and no

unanimous conclusion can be drawn. In view of the fact that there is no consensus, is it necessary for the Government to take a "broad-brush" approach to phase out all small diesel vehicles, so that all the people in the trade have to suffer from hardship?

I have asked for the opinions of the trade. They hold the opinion that to switch to the use of petrol as the fuel for commercial vehicles will lead to the following problems:

First of all, the fuel consumption of petrol vehicles is about 30% more than that of diesel vehicles. On average, each taxi will have to consume an additional 5 000 litres of petrol each year and public light buses (PLB) will have to consume an extra 11 000 litres. The additional consumption of petrol will not only boost the operating cost, but will result in even more emissions. And similarly, the emissions degrade our environment and are hazardous to our health. In addition, according to the conservative estimation of the trade, the maintenance cost for petrol vehicles nearly doubles that for diesel vehicles. More fuel consumption will shorten the life span of vehicles, thereby further pushing up the maintenance cost. The expenditure for the additional cost will push up the operating cost and the travelling fares will inevitably rise. The people in the trade estimate that the increase in travelling fares will be far more significant than the Government's estimation. It was estimated that the taxi flag-fall would rise to as much as \$30 or even higher after the five-year period. The increase in fares will be passed on to the general public and will deal a direct and severe blow to the livelihood of the drivers. The people in the trade estimate that, by that time, their business will be cut by two-thirds.

Apart from the issue of cost, the issue of petrol consumption alone will have a tremendous impact on the operation of commercial vehicles. Taxis have to run on the road for about 20 hours a day and engines of petrol vehicles cannot keep going for too long because if they run continuously on the road for as many as eight hours, the mechanical parts will then become overheated and the water inside the radiators of the engines will then "boil". At that time, the engines of the vehicles have to be turned off to avoid the possible breakdown of the vehicles. In

addition, if flooding occurs on the road, petrol vehicles are more prone to possible breakdowns. If the Government's proposal is put into practice, we can hardly imagine what the situation will be.

Mr President, I must stress the point that I lend my unreserved support for protecting the environment and improving the air quality. However, before it is well-substantiated that burning diesel will pose a greater threat to human health than burning petrol does, we do not need to make the hasty decision of taking a "broad-brush" approach and to replace all diesel vehicles with petrol vehicles. Furthermore, for the commercial vehicles, the switch to petrol as fuel will involve the above problems such as the cost effectiveness and the operation of the vehicles. There will be adverse effects on the people in the trade as well as the consumers.

In fact, in regard to the pollution problem of diesel vehicles, there are some other alternatives to control the smoke emitted from diesel vehicles apart from this "broad-brush" proposal raised by the Government. Some studies pointed out that the particles emitted by diesel vehicles can be reduced through the following means and it is not necessary to abandon the use of diesel completely:

1. exercise of proper and quality monitoring and maintenance so as to reduce the emissions from diesel vehicles.
2. control over the quality of diesel by improving the sulphur content of diesel, which is also conducive to reducing the level of particulate emission. According to the information supplied by the oil companies, it is absolutely feasible to refine and produce diesel with sulphur content as low as 0.05%. The price of which will be even lower than that of leaded petrol.
3. specification of the quality standards of imported vehicles. At present, the Hong Kong Government does not exercise control over the quality and function of imported vehicles, resulting in vastly different qualities of imported vehicles.

However, the quality of vehicles will directly affect their emission of smoke. If the Government succeeds in controlling the quality of new vehicles, it will be conducive to reducing the smoke emitted by diesel vehicles.

Mr President, since we can achieve the same purpose of protecting the environment by monitoring, inspecting and maintaining the vehicles, why should we take the compulsory measures of replacing diesel vehicles with petrol vehicles? Why should the Government be dead set on having its own way and take the risk of affecting the livelihood of the people in the trade and jeopardizing the interests of the public?

Mr President, I so submit.

**MR MOK YING-FAN** (in Cantonese): Mr President, the Government has recently published the consultation paper, "Further Proposals to Reduce Emissions from Diesel Vehicles", proposing the diesel-to-petrol scheme to improve the air pollution situation. The community has expressed many opinions and arguments, criticizing the Government's proposal as plagued with inadequacies. In the past few months, I have met many different groups, including taxi associations and green groups, and I have heard of the comments of some academics regarding the Government's proposal. After summing up the opinions of all parties, the Hong Kong Association for Democracy and People's Livelihood (ADPL) holds that there are a lot of points in the paper that are controversial and have not been well-substantiated. Therefore, the ADPL and I cannot fully support the Government's proposal for the time being. We will now try to explore the problems arising from the diesel-to-petrol scheme from four perspectives, namely the environment, the operating costs, the technicalities and the social effects.

First of all, from the angle of environmental protection, the ADPL wholly supports the principle and direction of the Government. Since our air pollution has reached an unbearable state, as pointed out in the consultation paper, the ADPL will lend our support to the Government's proposal if the Government can come up with some proper arrangements

and if their arguments are well-substantiated. However, studies conducted by some academics since the Government put forwards the proposal point to the fact the emissions from both diesel and petrol vehicles have adverse effects on air quality and their actual differences bear some resemblance to the differences between oranges and mandarins, that is, both are sour. The taxi trade and some academics have indicated that petrol vehicles emit even more carbon monoxide and benzene and if all public light buses (PLBs) and taxis switch to petrol, then in the seriously polluted areas, such as Mong Kok and Kwun Tong, the level of Total Suspended Particulates (TSP) and Respirable Suspended Particulates (RSP) will only be reduced by 12% and 18% respectively. Therefore, it now remains inconclusive as to whether it is worth the cost to launch the diesel-to-petrol scheme. The Government only emphasizes that this scheme will cut the concentration of particulate emissions by half by 2002, while no consideration is made regarding changes in the concentration of other pollutants in the air and the overall changes of the air quality with increased use of petrol subsequent to the implementation of the scheme. On the other hand, someone has observed that after switching to petrol, the carbon dioxide emitted by vehicles will increase by 20% or 30% and that will intensify the greenhouse effect. The divided opinions show that we, the legislators and the public cannot decide right now as to whether diesel or petrol will contribute more to improving our air quality.

Other than that, the operating costs of diesel vehicles and petrol vehicles are considerably different. Will the Government compensate the diesel vehicle owners in respect of the price paid by them? Is it worth the while to pay such a price in exchange for the carbon dioxide emitted by petrol vehicles? At present, diesel vehicles are generally more durable, with a life span of 10 years. However, after switching to petrol, the taxi trade estimates that the operating costs will be more than twice as much because petrol vehicles are more expensive to run in view of the higher excise duties on petrol than diesel, more fuel consumption, a shorter operational life and more maintenance requirements. As to the catalytic converters which must be used together with petrol, the mileage of which is only about 80 000 kilometres. A taxi's mileage will well-exceed this figure after running on the road for one year. In addition to

this, the maintenance of the catalytic converters will also add to the burden on the vehicle owners. Furthermore, this proposal is targeted only at some of the diesel vehicles. For those heavy diesel-powered vehicles such as buses and heavy-duty transport vehicles, they are not within the scope of consideration. We feel that the Government's proposal is hardly fair.

As to the technicalities involved in switching from diesel to petrol, at present, the Government has proposed a five-year conversion period to allow more time for taxis and PLBs to attune to the arrangement. There lies the problem. During the five-year conversion period, diesel vehicles and petrol vehicles will operate side by side; however, since taxis serve the public and have to charge the public directly, should the Government adopt uniform charges or differential charges so as to balance the cost differences between petrol and diesel? The Government is yet to give us a reasonable reply in respect of this question.

May I ask: Has the Government ever considered any alternatives other than petrol with a view to improving the prevailing air pollution situation? According to a report published by the Hong Kong Polytechnic University, the Government may consider strengthening the existing control over diesel vehicles, such as tightening the emission standards, introducing "cleaner diesel" and exercising stricter control over the owners so that they will have to maintain properly and check their diesel vehicles. For vehicle owners who fail to do this, their Driving-Offence Points will be deducted and their driving licences will be suspended. Has the Government ever considered all the above proposals? I have heard the Government pointing to certain difficulties regarding the maintenance and checking of diesel vehicles. However, if that is carried out in conjunction with other monitoring measures, then will air pollution be improved so that the diesel-to-petrol scheme can be dispensed with? It seems that the Government has not given any serious thought to this possible alternative.

With regard to the social effects, a controversial policy cannot be compulsorily implemented when only one-sided arguments are presented. We need to take into account the overall social impacts, including the

impacts on the trade and on the general public, that is, the benefits and acceptability to the consumers, so that the scheme can be launched in a reasonable manner. Failing which, only social unrest and public frustration will result. As time passes, that will develop into a time bomb. We hope that the Administration can take into full account the views of all parties before implementing the relevant policy.

However, the ADPL has to state clearly that if the Government can come up with a clear formula to prove that petrol can more effectively reduce the concentration of air pollutants than diesel, instead of reducing the concentration of only a single pollutant, then the public and the ADPL will support the Government's proposal. As suggested in the surveys conducted by some newspapers, the public is willing to pay more to improve the overall air quality.

However, when it comes to the fuel for vehicles, I think that it is incumbent upon the Government to introduce many other complementary measures if our air quality is to be improved. These include suppressing the growth of private cars, and conducting a detailed assessment of air pollution caused by emissions from transport vehicles running between China and Hong Kong. If the Government focuses only on one aspect, then even if the switch to petrol is really set in motion, there is not going to be an overall improvement in our air quality.

With these remarks, I support the motion moved by the Honourable Mrs Miriam LAU.

THE PRESIDENT'S DEPUTY, DR LEONG CHE-HUNG, took the Chair.

**MR EDWARD HO** (in Cantonese): Mr Deputy, everyone in Hong Kong wants to breathe in good clean air. There can be no doubt about that. I believe that the community is prepared to accept reasonable measures to improve air quality and people may be willing to pay for the relevant measures. Therefore, the objectives that the Government publishes the

consultation paper, "Further Proposals to Reduce Emissions from Diesel Vehicles", are correct. Members from the Liberal Party are in support of the objectives.

What I am concerned about is that while the proposal seems to suggest that the diesel-to-petrol scheme must be set in motion, a host of questions unanswered have been raised by experts and various sectors of our community, such as the question of economic costs and even the appropriateness of that proposal. Therefore, we must look into these issues with prudence.

We must acknowledge that there will have to be financial costs to be borne by the community if air quality is to be improved, just as there are legislation governing the payment of industrial fuel charges, sewage charges and other relevant charges. All these are the prices that we have to pay. But, it is incumbent upon the Government to assess correctly the impacts of these proposals on various sectors and to re-examine the information supplied by the trades. Those trades that are directly affected by the diesel-to-petrol switch claim that the Government has underestimated the economic impact on their trades and on the general public subsequent to a switch to petrol. They have now presented reference figures which differ drastically from those supplied by the Government in support of their arguments. These information have to be re-examined in detail and in a fair manner.

In dealing with environmental protection, social costs ought to be taken into account but it is not the only concern. Members were visibly shocked to hear from a representative of an environmental group testifying before the Legislative Council Panel on Environmental Affairs that it was not proven, from an overall medical and health point of view, that petrol vehicles are more environmentally friendly than diesel vehicles. We understand that petrol vehicles would consume more fuel and cause global warming and they would emit other harmful substances such as carbon monoxide and benzene, which are also carcinogenic. Dr the Honourable LEONG Che-hung has also raised this point but to my surprise, despite that being said, he is still going to support the compulsory diesel-to-petrol scheme.

These viewpoints have prompted me to look into this consultation paper a little further, and I have found that the Government's consultation paper does not contain any information on the other side of the argument.

In my efforts to understand the matter more deeply (which means I have to read through papers piled up to almost one inch thick), I have found that a large number of researches done by academics here and abroad indicated that the argument on diesel and petrol vehicles is not such a black and white case as was presented by the Government in the consultation paper. There are a lot of points for further detailed study.

Mr Deputy, it would not be possible to cite all the technical arguments on both sides in this debate. With one accord, many academics and experts have held the opinion that there are many alternative solutions that the Government can but does not implement. These measures or solutions may be more cost effective and possibly less harmful to the environment. In the long run, alternative kinds of energy which are more environmentally friendly should also be explored.

On the question of the use of diesel powered vehicles, I learned that in Germany, tax reduction for diesel vehicles had been effected recently to encourage the use of diesel vehicles because of its fuel economy and lower carbon dioxide emissions.

According to a study conducted by Mr HUNG Wing-tat, Assistant Professor at the Hong Kong Polytechnic University, emissions from larger diesel vehicles are responsible for more than 60% of emission pollution in the busy areas of Mong Kok. The Government has not indicated whether it has any plans to expedite the introduction of low sulphur content diesel fuel, albeit sulphide being one of the major components of particulate emissions. The lowering of sulphur content in diesel to 0.05% (as compared to the present level of 0.2%) means that all diesel vehicles can have an improvement.

What we must urge the Government to do is that it should consider more seriously and urgently a comprehensive and long-term approach to achieve cleaner air. Apart from advocating the use of low sulphur

content diesel, the Government should also consider introducing other kinds of clean energy. In particular, the means to cleaner air must include the use of clean fuel in public transport, such as electric trains, cars and so on.

I have said many times that an important way to reduce busy traffic flow is by town planning. Simply put, this means decentralizing business and work centres so that people do not have to travel long distances between their homes and workplaces.

The Honourable Mrs Miriam LAU has suggested in her speech a whole range of interim and long-term measures that the Government can consider and adopt before the implementation of the mandatory scheme. Her motion does not preclude any measures which may be made mandatory in the future. Therefore, her motion is worth our support.

With these remarks, Mr Deputy, I support Mrs Miriam LAU's motion.

**MR PAUL CHENG:** Mr Deputy, first of all I should declare an interest in the this subject as I am associated with a company which provides a large number of taxis and public light buses in Hong Kong. Having said that, I should also point out that, while switching from diesel to petrol will cause a certain amount of disruption in the short term, the longer-term impact to our overall business will not be significant as we sell petrol and diesel vehicles.

Through my association with the motor trade, I have access to experts in the sector, and thus feel able to speak with some knowledge on this important issue. After all, my colleagues work closely with many international motor manufacturers around the world, and are very familiar with studies on fuel emissions and standards, and with the latest developments in engine technology.

There is certainly a lot of information out there. And the one thing it all seems to point to is that the argument about whether diesel is

more of a pollutant than petrol — or vice versa — is totally inconclusive.

The Government has decided overwhelmingly in favour of petrol as the cleaner option. However, there is a significant body of opinion that thinks otherwise. It is also interesting to note that diesel vehicles are still widely used as rental vehicles in many developed countries, including the United Kingdom, Germany, Belgium, Denmark, Finland, Portugal and even Singapore.

The government consultation paper oversimplifies this complicated issue, and, perhaps in order to support its own recommended course of action, seems to gloss over a number of points.

The paper focusses on the potential threat to health from diesel, and especially from respirable suspended particulates (RSP). Yet it says little or nothing about the health threats from carbon dioxide, carbon monoxide, nitrogen oxides and hydrocarbons given out by petrol engines. The focus on RSP is understandable as this is perhaps the most visible of pollutants, but we should not be misled into believing "what you cannot see would not hurt you".

According to taxi and light bus operators, the proposed conversion from diesel to petrol will lead to an increase in fuel consumption of between 25% and 60%, depending on vehicle type. These estimates are considerably higher than the Environmental Protection Department's own assumptions. Such a dramatic increase in fuel consumption is surely against the amount of carbon dioxide produced. Higher fuel consumption by public service vehicles will also impact on the general public, who will inevitably have to pay more for transportation.

Before we rush into introducing drastic and costly measures to convert diesel vehicles to petrol, further study is required, especially when there are a number of experts who would dispute the wisdom of those measures. This is a long-term strategic decision with long-term consequences. Switching from diesel to petrol will not happen

overnight, it will be more of an evolutionary process. Meanwhile, technological improvements are continuing to be made and motor manufacturers are continuing to research alternative fuel sources.

The issue is not just about petrol versus diesel, but more about the whole question of air pollution and vehicle fuel management.

Meanwhile, the Government should focus on methods which can help to reduce air pollution in the short term. These include:

- Stricter emission standards with stronger enforcement and heavier penalties for offenders. Put more teeth into these measures;
- Tougher controls on diesel engine maintenance through legislation perhaps and not just merely encouragement; and
- To make use of the cleaner possible diesel fuel, making them mandatory if they are available.

There is another area often overlooked in discussion relating to air pollution and this is reviewing of the regulations governing transportation of vehicle fuel, and petrol station management. To support this point, I would like to quote a recent report that a modern saloon car being driven from Bristol to London at a steady speed pollutes less than a teaspoonful of petrol spilt at the petrol station.

Cleaner air and a cleaner environment is something we all wish to see. However, the diesel versus petrol debate is not as straightforward as the Government would have us believe. The Government has stated its opinion, but it has not proved its case. And the jury is still out elsewhere in the world too.

With these comments, I intend to support the original motion calling on the Government to further review this issue and reconsider the mandatory nature of their proposal.

These are my remarks, Mr Deputy.

**MISS CHAN YUEN-HAN** (in Cantonese): Mr Deputy, I believe no one in Hong Kong will doubt the importance of a clean environment and fresh air to our health. However, from the recommendations of the Government published last month, I can see that when the Government raises a question in one aspect, it is negligent in another aspect. That would make us feel that the Government adopts double standards or that the Government favours one particular side at the expense of another or that the Government acts with undue haste. Why do I have this sort of feeling about the consultation paper? The reason is that when I go over this consultation paper, I can see that the Government's proposal in respect of diesel vehicles of four tonnes or below is in fact a "broad-brush" approach whereby all these vehicles of four tonnes or below are to be phased out compulsorily within five years. However, I would like to ask the Government: "How about those which are above four tonnes?" The Government's consultation paper does not give us any answer. Some of our information reveals that, as at April 1995, there were almost 70 000 taxis, public light buses (PLB) and light duty vehicles that were diesel powered; other heavy duty vehicles using diesel including the heavy duty trucks, container trucks and buses, numbered over 60 000. In other words, the numbers of these two categories of vehicles are almost the same. Can the Government tell us why such a biased attitude is adopted?

Although we can see that taxis and PLBs run on the road for longer periods each day, the pollutants emitted by heavy duty container trucks and buses are almost three times the pollutants emitted by light duty vehicles. In addition, the growth rate of heavy duty container trucks for the last year was almost 66% but the growth rate of taxis and PLBs was only 1.8%. The two differ considerably. We are therefore convinced that heavy duty diesel vehicles pollute the air no less, or even more, than light duty diesel vehicles do. The consultation paper makes it explicit that there will not be any control in this respect for the time being. It was also pointed out in the consultation paper that "This task will be made more practicable and cost-effective once all smaller vehicles have switched to petrol and the number of diesel vehicles has been

reduced by almost half." I do not think that this hollow argument can convince us or the public that we should tolerate the smoke emitted by the heavy duty vehicles.

This consultation paper gives us an impression that exercise by the Government of further control over the smoke emitted by heavy duty vehicles has been put off to the indefinite future. I query why the Government cannot exercise smoke control over these heavy duty vehicles concurrent with its exercise of control over light duty trucks? At the time the Government makes it compulsory to phase out all small diesel vehicles, it allows heavy duty vehicles to emit smoke. It can hardly be justified and that cannot dispel the criticism that the Government is biased.

Mr Deputy, I also think that this paper has not addressed some of the very important issues. Some of my colleagues have touched upon these problems and I hold that before the Government is poised to solve these problems, it cannot jump to the conclusion of phasing out all diesel vehicles of four tonnes or below. This would be too hasty. As is pointed out by many of my colleagues, it remains inconclusive whether the Government's assertion that diesel is more polluting and is, overall speaking, more harmful than petrol is true. It is of course beyond doubt that the number of suspended particulates emitted in the course of diesel burning is higher than that emitted in the course of petrol burning; however, petrol will at the same time emit more carcinogens such as benzene and the greenhouse gas carbon dioxide. In addition, the rate of fuel consumption for petrol is about 30% higher than the fuel consumption rate for diesel. The higher consumption rate results in more energy loss and more pollutants. In the Government's study report, we can see that the Government is evading the crucial points and dwelling on the trivial ones when it makes suggestions on some of the issues. Under this situation, I hold that the Government's philosophy can hardly convince the public, including my colleagues in this Council.

In fact, we can see that the researches conducted by academics in the community and by the PLB and taxi associations show that petrol is not necessarily cleaner than diesel. Mr Deputy, I am not an

environmental expert and I believe that many of the Members here are not experts in this area either. Therefore, we cannot judge whose argument is right and whose is wrong just based on the available information. This is somewhat similar to the question of electromagnetic field that came before us this morning. As a member of the public who is concerned about protecting the environment, I hope that the Government can co-operate with the academics to conduct researches together, with a view to reaching a consensus and coming up with a genuinely convincing option and measures for improving the environment of Hong Kong.

Going over the entire consultation paper, we can see that the spirit is really commendable; however, the proposal requires in-depth discussion. I propose that the Government should not rush into any decision at this stage because the launching of this policy will have a tremendous impact on the livelihood of the vehicle owners and the drivers of commercial vehicles. Before we are in a position to differentiate between the effects of diesel and petrol on our health, I feel that we need to listen to the opinions of the trade, the experts and the academics. More comprehensive and detailed researches should also be conducted. Take for example, regarding the emissions from diesel and petrol, which is better and which is worse? Can petrol vehicles meet the requirement of long running hours which is the pre-requisite for commercial vehicles?

Mr Deputy, I believe that if the Government can really give sound reasons to support the assertion that petrol is superior to diesel and can, at the same time, formulate a set of effective and reasonable conversion measures, then the community and the trade will of course be more than glad to use the type of fuel that is more environmentally friendly and is more acceptable to the people of Hong Kong. As to the concessionary measures suggested by the Honourable Mrs Miriam LAU to attract diesel vehicle owners to switch to petrol, I do not think that we need to rush into discussing the details of these concessions before we have reached a conclusion on the paramount premise. It will not be too late for us to discuss these measures after we have come to a definite conclusion on the

paramount premise.

Mr Deputy, I so submit in support of the original motion.

**DR JOHN TSE** (in Cantonese): Mr Deputy, the Government proposes that all vehicles of four tonnes or below switch to petrol in the hope that the concentration of suspended particulates in the air can be reduced. The Democratic Party welcomes and supports the determination of the Government in improving the air quality of Hong Kong. However, we have some reservations about some of the contents of the scheme. In fact, if the emissions from vehicles are to be reduced, the Democratic Party thinks that it can be achieved mainly through the following means:

1. using cleaner fuel;
2. engineering appropriate maintenance programmes;
3. improving vehicle emission control techniques;
4. controlling the traffic and transport systems so as to reduce the usage rate of vehicles.

It is really a pity that the Government focuses only on the first method while ignoring the other alternatives.

#### *Using cleaner fuel*

It is beyond doubt that the Government's current proposal of switching to petrol is for the purpose of reducing the concentration of particulates in the air. However, at the same time, we cannot turn a blind eye to the air pollution caused by petrol powered vehicles. Reports from foreign countries show that the emissions from petrol powered vehicles include the carcinogenic "benzene", the greenhouse gas

carbon dioxide and the poisonous carbon monoxide. The relationship between diesel powered vehicles and petrol powered vehicles is somewhat similar to that between a rotten orange and a rotten apple. Although the particulates emitted by diesel powered vehicles is 50% to 80% more than that emitted by petrol powered vehicles, the toxic pollutants emitted by petrol powered vehicles, such as the highly volatile organic compounds, are really very "severe". However, the Government is now forcing all light duty vehicles to switch to petrol and we are quite afraid that this scheme is actually "driving a tiger away from the front door only to let a wolf in at the back".

Mr Deputy, I have just distributed to Members a chart explaining the incidence of cancer caused by vehicle emissions in the United States. This Report was published in 1990 showing the relationship between vehicle emissions and cancer in the United States in 1990. After implementing the diesel-to-petrol scheme, heavy duty diesel vehicles will account for about 17% of all vehicles in Hong Kong, which is similar to the proportion of diesel vehicles in the United States which account for about 20% of all vehicles. Chart one therefore provides a reference point for Hong Kong. We can see from Chart one that the relationship between diesel and petrol is in fact the relationship between a "rotten orange" and a "rotten apple". The percentage shows that petrol vehicles emit even more poisonous substances than that emitted by diesel vehicles.

In fact, the current level of technology shows that diesel with 0.05% of sulphur content is now available and reports show that using this type of clean diesel can significantly reduce the emission of particulates. Vehicles may also install particulate traps or catalytic converters to clean up the emissions from vehicles. I doubt why the Government has been so reluctant to introduce to the market this type of clean diesel but resorts to a "broad-brush" approach of switching to petrol. On the contrary, if vehicles use illegal fuel, for example, if diesel vehicles use illegal marked oil or if the vehicles that should use unleaded petrol switch to leaded petrol, then the amount of pollutants emitted by these vehicles will increase 10 times. Obviously, the top priority for the Government is to prevent the use of improper fuel instead of taking a "broad-brush" approach and forcing the vehicle owners to switch to

petrol.

Secondly, the Democratic Party has numerous times urged the Government to step up its research work in looking for vehicle fuel that is more environmentally friendly. In fact, the "good apples", in my mind, are Liquefied Petroleum Gas (LPG), hydrogen gas, electrical cars and so on. There are about four million LPG powered vehicles running on the road. I hope that the Government can really take my proposal into consideration, particularly in terms of conducting researches in this area.

*Engineering appropriate maintenance programmes*

The cleanliness of the pollutants emitted by petrol vehicles depends entirely on the function of the catalytic converters. Moreover, researches point out that effective monitoring and maintenance programmes can reduce the amount of nitrogen oxides emitted by diesel vehicles by 10%, hydrocarbons and carbon monoxide by 25%. Therefore, the Government should regulate so that all vehicles must go through regular maintenance checks in order to ensure that the mechanical parts of all vehicles function properly and all vehicles conform to emission standards.

In addition, in view of the fact that the Government does not exercise adequate control over garages and vehicle mechanics, I propose that the Government should oversee the qualification of vehicle mechanics and should introduce a licensing system so that all vehicle mechanics will have to be examined and only those who are qualified will be licensed. In this way, the public will be aware of how to keep their vehicles in good repair in order to ensure that their vehicles will not be adversely affected from lack of maintenance or from illegal conversion. Air pollution can therefore be reduced.

*Improving vehicle emission control techniques*

Some years ago, the emissions from petrol vehicles constituted a major threat to the health of the public, but nowadays catalytic converters are capable of filtering out a majority of toxic pollutants. In fact,

technologies aiming at improving the emissions from diesel vehicles have also emerged and, as I have already said, the installation of particulate traps on diesel vehicles can effectively reduce the amount of emissions from diesel vehicles. However, the Government is still reluctant to introduce these technologies. Therefore, what the Government has to do now should be to strengthen the enforcement and the monitoring of the emission control programmes, to increase penalty and to step up prosecution against smoky vehicles.

It is thus crystal clear that at present there is no adequate data to support the mandatory switch to petrol scheme because there are other more moderate and effective means to improve the emissions from vehicles. It is a pity that the Government focuses only on the switch to petrol scheme. The Democratic Party holds that the choice of fuel for vehicles should be open and flexible. Now that there is obviously no one single fuel in the market that is absolutely superior to others, the use of one or two types of fuel alone is evidently an obsolete practice. If the Government has objective data to support its claim that petrol is environmentally more friendly than diesel, the Democratic Party does not rule out the possibility that we will support the Government's suggestion in the future.

These are my remarks, Mr Deputy.

**MR LEE CHEUK-YAN** (in Cantonese): Mr Deputy, we can look at today's motion debate from two angles. First of all, we may look at the issue from the angle of protecting the environment. Most of my colleagues who have delivered their speeches are not experts. After listening to the arguments for so long, I find it still inconclusive whether diesel is really inferior to petrol. From the angle of protecting the environment, even the experts are not sure which one is better and which one is worse. With this uncertainty in mind, we may draw the conclusion that there is yet no consensus view from the angle of environmental protection. I feel that with the rapid pace at which

today's technology is advancing, another new technology may emerge after one or two years. Therefore, I really doubt whether our discussion is really meaningful. Of course, we have to be concerned with environmental protection because protecting the environment is of paramount importance and it is relevant to the health of this generation and our next generation. However, it seems that all that is said by the Government is not hundred-percent worth our support even from the angle of protecting the environment.

Looking at the issue from the second angle, I feel that the Government has not paid due regard to the maintenance of people's livelihood. Of course, the Government may say that fuel duty concessions for taxis and buses would be offered for five years and so the Government has taken people's livelihood into account. However, how will it go about the matter after the five-year period expires? This is quite unfair because the Government has not taken into account the situation of the drivers of tens of thousands of light duty vans and trucks. They told us that their total monthly income was in the region of \$17,000 and the monthly cost was about \$12,000. In other words, they could only earn a net income in the region of a few thousand dollars a month. If they have to shoulder even more expenditure, they will be subjected to even more tremendous economic pressures. Can they sustain such pressures? Has the Government ever looked at this issue from this angle? The drivers have also told me that the Government has never thought of inducing them to switch to petrol by offering a cut in fuel duty. The operating cost for them will inevitably rise in the future. Another big problem is that they may not be able to pass on the increased cost to the factories in view of the keen competition in the trade. If the cost is to be increased, the ultimate consequence would be that they cannot pass on the cost to the passengers or to the clients as other commercial vehicles do. They would have to absorb the cost by themselves. Therefore, it will deal an even more severe blow to their livelihood. The Government's proposed way of doing it is the result of its failure to consider the matter from yet another angle and its failure to take into account the livelihood of those who are engaged in the trade.

Therefore, I would like to appeal to the Government simply not to make the scheme mandatory. It would be much better if all green groups, drivers of commercial vehicles and professional drivers could sit together to identify a "win-win option", so that we could on the one hand do a better job in protecting the environment while on the other hand the livelihood of all occupational drivers could be taken into account. After succeeding in identifying such a "win-win option", it can then be re-introduced into the Legislative Council for discussion. We hope that the next discussion on this issue will be even more constructive.

Thank you, Mr Deputy.

**MR CHAN KAM-LAM** (in Cantonese): Mr Deputy,

*The sincerity of the Government for consultation open to doubt*

The Hong Kong Government published a consultation paper on the diesel-to-petrol scheme in September and it was done in the good name of consulting the public. However, from the very beginning, the Government in fact already drew a conclusion. It is therefore in essence a policy statement rather than a policy consultation paper. With no presentation in the consultation paper of the pros and cons of the scheme, the paper only gives the impression to the public that there are only two choices — either support the diesel-to-petrol scheme or the public will have to pay a heavy price for polluting the air. It seems that the paper wants to convey to us a message, that is, only by switching to petrol can we be free from worries.

Whenever we propose to the authorities that they should assist the growth of local industries and should have long-term economic planning, the Government immediately takes out "the imperial sword", arguing that free economy cannot be interfered with, so on and so forth. However, contrary to the usual practice, when it comes to the diesel-to-petrol

scheme, the Government stops short of inducing self-initiated improvement in the trade by offering economic incentives, but boldly seeks to implement a mandatory policy of intervention. This compulsory switching proposal can hardly be convincing at all.

THE PRESIDENT resumed the Chair.

*"What failed to catch the eyes is regarded as clean"?*

Mr President, the diesel-to-petrol proposal will only shift pollution from one source to another. From a superficial point of view, petrol is cleaner but it brings another type of fatal pollution. I wonder if the Government really subscribes to the principle of "what failed to catch the eyes is regarded as clean". The relatively high proportion of diesel powered vehicles in Hong Kong is a result of the Government's persistent failure to incorporate environmental protection factors into our macro transport policy. The "broad-brush" approach currently proposed by the authorities will, all of a sudden, turn those who make a living out of this trade into innocent victims of the Government's lack of comprehensive insight with regard to environmental protection.

*The level of "Respirable Suspended Particulates" cannot be used as a "safety yardstick" for air*

In addition, it is pointed out in the consultation paper published by the Hong Kong Government that the authorities have to devote their efforts to reducing the amount of "Respirable Suspended Particulates" (RSP). It is believed that the public can enjoy fresher air through this means. Some environmentalists have already pointed out that "RSP" is a concept that is still under study. The World Health Organization (WHO) originally used this as the yardstick but this yardstick is now subject to question. Therefore, RSP alone cannot be used as the only yardstick for determining air safety. In fact, benzene, organic substances and other hydrocarbons are also carcinogenic. Scientists are conducting researches in this area. Under the circumstance that there is no

consistent air safety standards, it would be unwise to choose one particular method to improve local air quality.

*Exercise of stricter control and Introduction of Quality Assurance Maintenance Programmes*

I believe that, at present, the Government should conduct more in-depth study and provide even more data regarding the problems caused by diesel powered vehicles and petrol powered vehicles. It should also provide more options for the public's reference and discussion. Prior to the provision of such information, the Government could only resort to exercising stricter monitoring measures and specifying higher standards for the import and maintenance of various categories of vehicles. Concurrently, I urge the Government to take into practical consideration the "Quality Assurance Maintenance Programmes" proposed by trade organizations in collaboration with vehicle maintenance companies. This scheme should be able to secure the support and participation of the Government with a view to raising the maintenance quality of diesel vehicles as well as other vehicles.

*Increased burden on consumers*

Mr President, the Democratic Alliance for Betterment of Hong Kong (DAB) subscribes to the "polluter pays" principle but the Government's current proposal, if implemented, will only transfer the increased cost to the consumers and the consumers will ultimately have to bear additional expenditure that is substantially higher than the present level of expenditure. Yet the increased expenditure cannot guarantee that the expected results will be forthcoming.

As a matter of fact, petrol is more expensive than diesel. Although the Hong Kong Government suggests that those vehicle owners using petrol will be provided with tax concessions, yet the concessionary period will last for only five years, and the rate of concessions will be reduced year after year. The consumers will inevitably be affected.

In addition, the rate of fuel consumption for petrol vehicles is higher than that for diesel vehicles. The consultation paper also concedes that every litre of petrol runs 1.6 kilometers less than diesel does. Taking into account the yearly reduction of fuel duty concession, the cost of fuel for petrol vehicles will be 87.7% higher than that for diesel vehicles.

Furthermore, the maintenance cost for petrol vehicles is higher than that for diesel vehicles. Trade organizations have asked for quotations in respect of the annual fees required for maintaining and repairing petrol vehicles from the maintenance and repair departments of various vehicle companies. The quotations thus provided point out that the maintenance expenditure for petrol vehicles differs from what is suggested in the consultation paper and there is a great discrepancy between the two.

Therefore, I doubt the reliability of the estimation as contained in the consultation paper with regard to the effects that the scheme will have on the travelling fares for passengers, in particular, the data concerning the annual fees for the maintenance of petrol vehicles.

*The hasty "broad-brush" option not feasible*

Mr President, today we are not discussing whether we should support environmental protection or whether we want fresh air. I just want to make it clear that it would not be feasible to adopt hastily an option in the absence of sufficient justification.

Before we reach a conclusion on whether diesel or petrol is superior, the Government should not adopt any inconvenience-causing measures to promote the diesel-to-petrol scheme. Mr President, I hope that the authorities can heed our opinions and shelve the diesel-to-petrol scheme in respect of diesel vehicles of four tonnes or below.

I so submit.

**DR LAW CHEUNG-KWOK** (in Cantonese): Mr President, today, I will speak very briefly on the issue of cost.

In the first few years of its implementation, the Government-designed plan may be giving preferential treatments to people in the trade and passengers, but five years later, the extra costs will mainly be borne by owners of diesel vehicles, drivers and passengers. This may be a manifestation of the Government's "polluter pays" principle.

In fact, fresh air is beneficial to the entire community. I think the long-term costs should be borne by public funds. I hereby propose a principle of "cost approximation", that is, a person, be he a member of the trade or a passenger, should only pay that amount of cost which approximates the amount he was required to pay previously. All extra expenses should be paid out of Government funds, and if necessary, out of the huge amount of surplus available.

I very much hope the Government will revise its policy in the light of the above viewpoint. The Hong Kong Association for Democracy and People's Livelihood supports the original motion. Thank you.

**PRESIDENT:** Mrs Miriam LAU, do you wish to speak? You have five minutes to speak on the amendment.

The Secretary for Planning, Environment and Lands indicated he had not spoken yet.

**PRESIDENT:** Mrs LAU is not making the final reply. She is speaking on the amendment.

**MRS MIRIAM LAU** (in Cantonese): Mr President, in spite of the fact that the Government has heard numerous voices raised against the Government's proposal in this Council today, the Government should find comfort in the fact that at least one or two staunch supporters (Dr the Honourable LEONG Che-hung being one other) have stayed firm in believing that only by adopting the Government's proposal can our air quality be truly improved.

Having listened to the brilliant views of the Honourable Miss Christine LOH, I find that there is in fact a big difference between my motion and her amendment. The difference is that Miss LOH thinks it should be made compulsory for diesel vehicles under four tonnes to switch to petrol, and her proposal to the Government is merely a patchwork of ideas; whereas my motion essentially opposes such a compulsory measure, but allows for consideration of other ideas. It seems that what Miss LOH is thinking tallies with the Government's, having the respirable suspended particulates (RSP) as the prime target. I am also of the view that RSP should be tackled, but does it mean that we can just ignore other issues? Just now in my speech, I have also suggested other options for consideration, but Miss LOH has not listened (I have no idea whether or not she has listened) to them as she has made no response. She seems to be thinking that these options are completely useless, whilst only the Government's approach is the most effective one. However, Miss LOH has admitted that both diesel vehicles and petrol vehicles are emitting pollutants, only that the compositions of pollutants from these two sources are different. And so she criticized me for having made a comparison of them. However, both kinds of pollutants have adverse effects on the environment, so why is it that Miss LOH is still in support of the Government's approach? Miss LOH has made no response whatsoever to the apprehension common among the public, people in the trade as well as myself, and that is: Are the pollutants from petrol really harmless to us? Apart from the Government, there is so far no one or no expert who can say for sure that RSP could be reduced after people have switched to petrol, and that benzene and carbon monoxide will not increase substantially to damage people's health. Do pollutants such as benzene and carbon monoxide, which damage people's health,

cause Miss LOH no concern?

The Government has indicated that the proposal is based on the principle that there will not be any gain or loss in tax revenue. Well, if there is not going to be any effect on the tax revenue, how can there be any surplus? When I first looked at the wording of Miss LOH's amendment, I found it very confusing. But when I thought about it, I then came to understand that the favourable terms offered by the Government were in fact profiteering in disguise because as more and more vehicle owners switch to petrol, the consumption of petrol will go up. The Government will be able to gain more in fuel tax revenue by the first year at the latest, after the 10-year period for the favourable terms has ended. And if it is like what the trade has said, that the Government had underestimated the consumption of fuel after the switch, then the Government will probably be gaining extra fuel tax revenue even within the 10-year preferential treatment period. There is simply no such thing as the principle that there will be no gain or loss in tax revenue, as claimed by the Government.

Miss LOH is an environmentalist. However, there are as well a number of environmentalists who do not approve of the Government's proposal. Quite a few Members of this Council are also in support of environmental protection. It is exactly because we support environmental protection that we cannot hastily accept these ideas of the Government's. We also find it a pressing matter to reduce RSP. But on the question of switching from diesel to petrol, solving one environmental problem may bring about many other environmental problems, which include a change in the form of pollution, increased consumption of energy and so on. Can we just ignore them completely? In fact, there are other methods to reduce RSP which are yet to be adopted in Hong Kong, and these methods can also improve our air quality. They will only have positive effects but no negative effects. So why do we not look into them and apply them? Why not give it a try?

Another environmental problem that is of much concern to people but has not been mentioned by Miss LOH is the question of carbon

dioxide. Many years ago, Hong Kong prohibited the importation of aerosol products containing chlorofluorocarbon (CFC) and halon. Why was that? It is exactly the kind of feeling that although Hong Kong is a small place, it has also a part to play in reducing the damage done to the ozone layer. The Government used to say that the amount of carbon dioxide released was so insignificant that it could be ignored when we switched to petrol. Well, is it really true that it can be ignored in Hong Kong? In fact, the Government is saying that there are only two options — to switch or not to switch. Do we really have just two options?

Other colleagues and I have put forth quite a number of proposals. Are these proposals all completely not workable? Is it not true that the multi-pronged approach we have proposed to reduce pollutants in every way better than the two-pronged approach to reduce only one kind of pollutant? I am willing to hear from the environmentalists, and I also hope that the environmentalists will be willing to consider my view.

With these remarks, I oppose the amendment proposed by Miss Christine LOH.

**SECRETARY FOR PLANNING, ENVIRONMENT AND LANDS** (in Cantonese): Mr President, first of all, I would like to thank all Members for their time and effort in examining the various suggestions contained in the consultation paper published on 19 September. I want to point out that this paper has reflected the Legislative Council's concern for this problem in the past. Members have repeatedly pointed out in the past that the air quality in Hong Kong is getting worse and worse and they consider that we should put forward proposals to make diesel-powered vehicles switch to petrol-powered vehicles as soon as possible. We have now managed to do this. But the response we get has surprised us. We are now in the process of consulting the public and the Government has never said in the consultation paper or on open or private occasions that the public are faced with two alternatives only - take it or leave it. We have never said such things and I do not know why Members have such ideas and misunderstandings.

Actually, during the consultation period, many questions have been raised. I wish to answer them one by one today and clarify the misunderstandings caused by this paper or any other discussions. Nevertheless, I wish to stress one point which have been agreed to by all Members during the debate just now and that is, the air pollution in Hong Kong is so serious that it has reached an unacceptable level and is beginning to have an adverse effect on the public health. In fact, in this consultation paper our greatest concern is the public health because the main problem with our air quality is the extremely high level of respirable suspended particulates (RSP) and the urban areas are the very place where most people live and work. Therefore, perhaps at the beginning, I want to talk to Members about the damage caused by RSP. Although many Members have mentioned that before, what I want to discuss now is our present air quality.

The monitor of the air quality has indicated that the RSP content in the air in the urban areas is 25% higher than the highest RSP content specified by the annual air quality objectives. Owing to the continuous increase in the number and usage of vehicles, the air pollution level caused by RSP and even other exhausts is also on the rise. Surveys conducted in the United States, Britain and Europe all indicate that such RSP are directly related to respiratory diseases including asthma, and will also bring up the death rate. Moreover, it is beyond doubt that the particulate pollution is mainly caused by diesel vehicles. The particulates emitted by the diesel vehicles represent about 98% of the road traffic emission. Some Members question about the situation in other countries. One point I want to raise is that in November this year, the British Times reported that in Britain close to 10 000 deaths are caused by RSP annually. In the same month, the New Science Magazine also reported that a group of World Health Organization experts who having studied many different places in Europe came to the conclusion that thousands of people in Europe may have their death rate raised because of the RSP in the air. And recently, a group of British experts, having studied the air quality in 10 different communities in the country, assuredly point out that the air pollution caused and the particulates emitted by vehicles have direct relation with the death rates. When a Member mentioned these just now, it seemed that the standards

of the World Health Organization were under question. I want to say that the group of World Health Organization experts has just proved that their conclusion is still valid. I also want to compare Hong Kong with other places. In many overseas countries, diesel vehicles only represent 10 to 20% of all vehicles in the whole country but in Hong Kong, about 32% of the vehicles are diesel-powered and 62% of the mileage is made by these vehicles. As we are extremely dependent on diesel vehicles and the particulate content in the air continues to exceed the health-orientated air quality objectives, we are therefore anxious to lower the total particulate content in the air as soon as and as much as possible.

We propose a two-pronged strategy. First, we propose to cut down the number of diesel vehicles by half; second, we must enhance the prevention, repair, maintenance, and the law enforcement programme and the prosecution work in regard of the rest of the diesel vehicles. Our top priority is to protect the public health. This objective needs to be and must be achieved with every effort of ours and the public also expect the Government to take action.

Nevertheless, during the consultation period and even in the debate just now, some people have indicated that they are not too clear about the real situation of this proposed environment improvement scheme. I want Members to know that this scheme aims at replacing diesel vehicles of four tonnes or under with vehicles running on unleaded petrol fitted with catalytic converters because emissions of diesel vehicles pollute the environment but petrol vehicles produce less pollution to the environment. We expect that after the implementation of the scheme, the RSP content in the air will reach the standard specified by the air quality objectives of Hong Kong by 2001. The scheme is designed in such a way that the operation costs of light goods vehicles will only increase slightly while the operators of taxis and public lights buses do not have to bear the extra costs while their passengers will only have to pay slightly higher fares. We believe that this end can be achieved by only taking some fiscal measures as an encouragement. To encourage owners of diesel vehicles of four tonnes or below to have an early switch to petrol vehicles so that the air quality in Hong Kong will be improved shortly, we propose a series of fiscal measures which have been stated very clearly in the

consultation paper. These fiscal measures have reflected the Government's determination to resolve this problem and that we have taken the air pollution problem caused by diesel vehicles very seriously. We have received many views expressed in the debate just now and during the consultation period from which we notice there are objections on various grounds. To sum up, we have found that the grounds of objection are in four major categories.

- (a) This scheme is not fair as it does not include large vehicles of over four tonnes and hence fails to tackle emission problem of this kind of vehicles;
- (b) This scheme will be harmful to the environment because switching to petrol will increase rather than reduce pollution;
- (c) This scheme is not necessary because we can tackle the vehicle emission problem through inspection, maintenance and repair programmes in order to reach the air quality objectives; and
- (d) This scheme is not feasible because our cost estimation is inaccurate.

Mr President, let me spend some time to respond to these comments one by one.

First, about fairness, as larger diesel vehicles have no need to switch to petrol and hence some accuse this scheme of being unfair but the fact is not so. In the consultation paper just published, we have explained very clearly that we intend to employ another part of the vehicle emission control strategy to solve the emission problem of those vehicles that only run on diesel. After the implementation of the strategy, the sulphur content in diesel will further reduce from the present 0.2% to 0.05% which conforms to the emission control level of the strictest international standard and these vehicles will be required to undergo an annual smoke test. We also propose to step up law

enforcement and impose heavier penalties on vehicles which emit excessive smoke.

I will also refute the allegation that we are applying a double standard and that we are strict on the small diesel vehicles but lenient on the large ones. At present, small diesel vehicles represent 47% of all diesel vehicles in Hong Kong with their mileage representing about 62% of the total made by all diesel vehicles and these vehicles emit about 51% of the total particulates emitted by all vehicles in Hong Kong. Therefore, small diesel vehicles are contributing a significant portion to the pollution of the air.

The second concerns with the environment protection. Those criticizing us claim that this plan does not benefit our environment. We have already make it clear to the Legislative Council Panel that the particulates emitted by vehicles in the urban areas are the crux of the problem. The diesel-to-petrol scheme will actually cut down the particulates emitted by vehicles, which are the crux of the problem, by 51% to meet the air quality objectives. Although after these diesel vehicles have switched to petrol, the carbon monoxide content in the air will increase by 34% but this content is far below the level specified by the air quality objectives and is harmless to health. Similarly, after vehicles switching to petrol, although the content of carbon dioxide in the air will increase by 25%, it is not harmful to health and neither will it breach our international duty to conform to the restriction of emission of greenhouse gases. We also expect that the benzene content will also continue to drop until it is half of the present content although our present content is already far below the international standard. Therefore, the diesel-to-petrol scheme will obviously allow us to pay the lowest price in return for some substantial and necessary improvement to the air which benefits the health of our lungs.

The third concerns whether there is the need. Some suggests that we can meet the air quality objectives by putting in place a stringent inspection, maintenance and repair programme and thus there is no need

for implementing the diesel-to-petrol scheme. One thing has been overlooked in this suggestion which is the particulates emitted by even a new diesel car is still over four times higher than which emitted by a petrol car. Even with proper maintenance, the particulates emitted by a diesel car that has run for five years are 10 times that of a petrol car. Both this fact and my explanation given just now indicate that a stringent inspection, maintenance and repair plan is only a strategic measure aiming to control the emission of larger diesel vehicles, which unlike the diesel-to-petrol scheme for the smaller vehicles, can substantially and effectively cut down the emission of particulates.

I also hope that Members will not forget that under the smoky vehicle prosecution scheme, we have laid down a strict inspection, maintenance and repair scheme and the result is outstanding. Under this scheme, we select about 6 100 out of near 18 000 taxis, about 2 100 out of 4 300 mini-buses and about 7 000 out of 40 000 light goods vehicles for inspection. According to past records, one half of the vehicles selected will be prosecuted within eight weeks for emission of excessive smoke. I want to point out that Hong Kong does have an inspection, maintenance and repair scheme but this scheme cannot lessen the impact of particulates on the air pollution.

It is very simple — no matter how effectively we carry out the inspection, maintenance and repair scheme, it is impossible to ensure we can achieve the air quality objectives but our proposed diesel-to-petrol scheme can almost eliminate all particulates emitted by small diesel vehicles and only by this stricter means that we can lower the RSP to an acceptable level. This point has already been clearly stated in the consultation paper. In the consultation paper, we have also explained clearly that the environment protection effect can be achieved by employing various schemes. The implementation of the inspection, maintenance and repair scheme can only stop the present not too satisfactory air pollution situation from further deteriorating. The installation of "particulate traps" or diesel catalytic device is in fact useless. Although those who criticize us claim that these devices will greatly improve the air, as far as we know, there is no where in the world

that has succeeded in reducing the amount of particulates with these devices.

The fourth concerns with the costs. Some are doubtful about our estimation. The consultation paper has already listed out the estimated costs. Most of these estimated figures are beyond dispute because they are calculated basing on known costs. Otherwise, like in the case of the repair and maintenance costs of the operating diesel taxis and public light buses, we also base on the figures provided by the Transport Department and relevant vehicle manufacturers and make our calculation as correct as possible. We hold a fairly open attitude when we calculate the costs. On the other hand, I believe Members also remember that at the Legislative Council meeting on 8 November, I promised that we would certainly conduct a review if our figures were proved to be incorrect when I was replying a question. At present, we are yet to eliminate the discrepancies between the figures of ours and those of the operators in the transport industry, but the discussion is underway.

In today's debate, I have heard some Members question whether we need to consider avoiding increasing or decreasing the Government's revenue. When we put forward the proposal, the most important thing that we consider is to ensure the scheme of switching to unleaded petrol will not lead to a decrease in the revenue of the taxi, public light bus and school mini-bus operators and keep the extra fares to be borne by the public in future to the minimum. We have also taken care to keep to the principle of not leading to an increase or decrease in the Government's revenue to prevent the Government from reaping revenues that it does not deserve or, in the long run, providing unnecessary subsidies to the public transport operators. It is against the principle of our financial budget to provide long-term subsidies for the transport operators because the revenue thus spent will have to be compensated with the taxpayers' taxes in general.

By the same token, those who suggest to apply any possible revenue from this scheme back to this very scheme have ignored the fact that in the first five years of its implementation, the Government has

already planned to spend \$485 million to ensure that this diesel-to-petrol scheme will run smoothly. This is just like when the Honourable Miss Christine LOH suggested to allocate public funds to subsidize the health care development, she had also ignored the fact that the Government had already allocated a large amount for the provision of health care according to the general procedure of allocation of resources. For example in 1995-96, the public expenditure for health care service is totalled as high as \$22 billion, having a real growth of 7.7%. However, I have repeatedly stated before that our greatest concern is not money but the harmful particulates in the air and that is the problem that we are trying to resolve.

Lastly, I want to talk about the proposal whether we should provide more preferences to attract car owners to volunteer to switch to petrol. Actually we have studied the feasibility of implementing this scheme on a volunteer basis. However, I have to point out that there are tremendous difficulties in doing so. First of all, a volunteer scheme does not specify the exact time limit for completion and is therefore unable to set a fair and reasonable fuel price and pricing structure. Secondly, such a scheme of no time limit will have a significant impact on the supply of vehicles. On the other hand, the vehicle manufacturers have to invest and produce unleaded petrol run taxis and public light buses to meet the special requirement of Hong Kong. On the other hand, they will only invest when there is a great demand. As a volunteer scheme is not attractive enough to make them want to alter the design of their products, the result may be an inadequate supply of vehicles or the vehicles may not suit the needs or they may be ill-equipped.

Thirdly, if the scheme is on a volunteer basis, only part of the vehicles will switch to petrol and that is not sufficient to improve the air quality of Hong Kong. The high content of particulates in the air of Hong Kong is mainly caused by diesel-powered vehicles which have a high mileage. Unless there is a significant drop in the number of these vehicles, it is impossible for us to meet the air quality objective of RSP. Moreover, it will take a longer time to implement the volunteer scheme and hence an early improvement to public health cannot be achieved.

Fourth, a volunteer system is not cost-effective. There will not be a noticeable improvement to our air quality on the whole and neither will the result match the resources needed as the resources will be divided, part of which goes to managing the volunteer scheme and the other goes to putting in place the system to maintain, repair and inspect those diesel-powered vehicles not taking part in this scheme and the effect will be greatly reduced. Since these are too many shortcomings with the volunteer scheme, it is not feasible in Hong Kong.

Mr President, I also want to respond quickly to some very brief comments made by Members in the debate just now. First, a Member mentions that the study by Dr RUSCO and Dr WALLS claims that the diesel-to-petrol scheme will only bring about a limited improvement to the air. But I want to point out that this study has mistakenly overestimated the particulate emission factors in petrol vehicles; in other words, it has underestimated the significant improvement that vehicles switching to petrol can bring about in this respect. In addition, this study has wrongly assumed that the existing diesel vehicles are using low quality fuel but the fact is not so. Therefore, it is not enough to resolve the particulate problem that we are now faced with just by improving the quality of the fuels.

Furthermore, a Member also points out that the study conducted by Hong Kong Polytechnic University which claims that small diesel vehicles only have a limited impact on air pollution. This study has underestimated the mileage made by small diesel vehicles in the urban areas and therefore failed to reflect the pollution caused by these vehicles. Another Member has also said that we can bring in very high quality diesel to solve this problem. At present, the production of the high quality diesel which does not pollute the air is very low in the world. Only very small amount of it is produced in Sweden and it is barely sufficient for the country and I wonder how we can import it into Hong Kong. Besides, it is another kind of vehicles that run on this high quality and non-pollution-causing diesel and therefore after all, it is involved with the switching of vehicles. Moreover, no one can guarantee that the prices of these high quality diesels will not be higher

than that of the unleaded petrol now available in Hong Kong. Many Members have also asked why we do not switch to other types of vehicles such as vehicles running on natural gas or light petroleum gas. Mr President, I want to point out that these cars are used in several cities including Melbourne, Australia. I think Members are also aware that five days ago I was in Melbourne myself observing the operation of these vehicles. Members are not too familiar with one point, which is that these cars have to be converted to petrol-run cars first before natural gas equipment can be added to them. Therefore, there is no such thing of diesel vehicles converting to natural gas vehicles and not a single car can purely run on natural gas. Another Member also mentions some other thing which I wonder from where he has got his argument that the proposals in the consultation paper will lead to an economic recession and will even bar diesel vehicles from entering Hong Kong from China. I really wonder how these arguments can be sustained. Therefore, I cannot accept this view. Lastly, as for some Member says that Germany encourages the people to resume the use of diesel vehicles, I think this information is out-dated because I know that the German Government has recently announced that abolition of this idea. At present, many European Economic Community (EEC) countries are in fact looking for even stricter systems to regulate or forbid diesel vehicles to go into urban areas.

Mr President, the Government considers that the diesel-to-petrol scheme is an important measure to help protect the public health and prevent the air quality from further deteriorating. But that is not saying that the increasingly advanced technology will not provide another alternative in future. We will keep on watching the technological progress in this respect and will also keep on reviewing. But with today's technology, it is indeed unable to really resolve the existing air pollution problem. Therefore, although the consultation period of this scheme is not over yet, we know that the Hong Kong people are very concerned about the air pollution problem. For the benefit of the people's health, I sincerely wish that Members will support our plan and co-operate with us to formulate further measures to improve Hong Kong's

air quality. We do not have much time to wait. Thank you, Mr President.

*Question on the amendment put.*

*Voice votes taken.*

THE PRESIDENT said he thought the "Noes" had it.

Mrs Miriam LAU claimed a division.

**PRESIDENT:** Council shall proceed to a division.

**PRESIDENT:** Members, I am sorry I have to delay you for a while. When Dr LEONG Che-hung was deputizing for me, Mr Paul CHENG spoke and he disclosed that his firm was selling both petrol and diesel engines. Mr Paul CHENG, in the interest of Members who may wish, if you vote, to challenge your vote subsequently, would you like to disclose in greater detail the nature of that interest?

**MR PAUL CHENG:** I will probably abstain.

**PRESIDENT:** Mr CHENG, you said you will probably abstain or you will abstain?

**MR PAUL CHENG:** I will abstain.

**PRESIDENT:** I would just like to remind Members that they are called

upon to vote on the question that Miss Christine LOH's amendment be made to Mrs Miriam LAU's motion.

Will Members please register their presence by pressing the top button in the voting units on their respective desks and then cast their votes by pressing one of the three buttons below?

**PRESIDENT:** Three short of the head count. Before I declare the results, Members may wish to check their votes. Are there any queries? The result will now be displayed.

Dr LEONG Che-hung, Miss Emily LAU, Miss Christine LOH and Mrs Elizabeth WONG voted for the amendment.

Mr Allen LEE, Mrs Selina CHOW, Mr Martin LEE, Mr SZETO Wah, Mr LAU Wong-fat, Mr Edward HO, Mr Ronald ARCULLI, Mrs Miriam LAU, Mr CHEUNG Man-kwong, Mr Frederick FUNG, Mr Michael HO, Dr HUANG Chen-ya, Mr LEE Wing-tat, Mr Eric LI, Mr Fred LI, Mr Henry TANG, Mr James TO, Dr YEUNG Sum, Mr Howard YOUNG, Mr WONG Wai-yin, Mr James TIEN, Mr LEE Cheuk-yan, Mr CHAN Kam-lam, Mr CHAN Wing-chan, Miss CHAN Yuen-han, Mr Andrew CHENG, Mr CHENG Yiu-tong, Mr Anthony CHEUNG, Mr CHOY Kan-pui, Mr David CHU, Mr Albert HO, Mr IP Kwok-him, Mr LAU Chin-shek, Mr Ambrose LAU, Dr LAW Cheung-kwok, Mr LAW Chi-kwong, Mr LEE Kai-ming, Mr LEUNG Yiu-chung, Mr Bruce LIU, Mr LO Suk-ching, Mr MOK Ying-fan, Mr NGAN Kam-chuen, Mr TSANG Kin-shing and Dr John TSE voted against the amendment.

Mr Paul CHENG and Miss Margaret NG abstained.

THE PRESIDENT announced that there were four votes in favour of the

amendment and 44 votes against it. He therefore declared that the amendment was negatived.

**PRESIDENT:** Mrs Miriam LAU, you are now entitled to reply and you have 39 seconds out of your original 15 minutes.

**MRS MIRIAM LAU** (in Cantonese): Mr President, an environment with fresh air is what the general public desire. Bu the point is that we must comply with the needs of the environment and should not become short-sighted by adopting the stop-gap measures only to deal with the present situation. We have to take into account the effectiveness of the scheme as a whole and its overall impact on environmental protection. I agree that the problem concerning particulates is very serious and have to be resolved. But it is also necessary to take an appropriate measure to tackle the problem. However, the Government fails to put forward a concrete argument to prove that the replacement of diesel by petrol is a proper measure. Under the circumstances, the Government should definitely not implement this scheme. There are six seconds left. I would like to thank my colleagues for their enthusiasm to speak today in opposition to the Government's proposal.

*Question on the original motion put.*

*Voice votes taken.*

THE PRESIDENT said he thought the "Ayes" had it.

Mrs Miriam LAU claimed a division.

**PRESIDENT:** Council shall proceed to a division.

**MR PAUL CHENG:** Mr President, when you raised the question earlier,

I was planning to abstain on Miss Christine LOH's amendment anyway, but I do not think I agree with your presumption just now and I want to vote on the original motion.

All I said is that I want to declare my interest because our company sells quite a few taxis and light vehicles and I think you should rule on that, because other people are driving diesel cars. How about all of us driving diesel cars and petrol cars? What is the difference?

**PRESIDENT:** Mr CHENG, I was only asking you to state in clearer terms the nature of the interest as I was not present in the Chamber just now, just in the event if some Member challenges your vote after you have voted. You may vote but there might be a Member who may wish to challenge your vote under Standing Orders.

**PRESIDENT:** Now, will Members first register their presence by pressing the top button and then proceed to vote by pressing one of the three buttons below?

**PRESIDENT:** Before I declare the results, Members may wish to check their votes. Are there any queries? The result will now be displayed.

Mr Allen LEE, Mrs Selina CHOW, Mr Martin LEE, Mr SZETO Wah, Mr LAU Wong-fat, Mr Edward HO, Mr Ronald ARCULLI, Mrs Miriam LAU, Mr CHEUNG Man-kwong, Mr Frederick FUNG, Mr Michael HO, Dr HUANG Chen-ya, Mr LEE Wing-tat, Mr Fred LI, Mr Henry TANG, Mr James TO, Dr YEUNG Sum, Mr Howard YOUNG, Mr WONG Wai-yin, Mr James TIEN, Mr LEE Cheuk-yan, Mr CHAN Kam-lam, Mr CHAN Wing-chan, Miss CHAN Yuen-han, Mr Andrew CHENG, Mr Paul CHENG, Mr CHENG Yiu-tong, Mr Anthony CHEUNG, Mr CHOY Kan-pui, Mr David CHU, Mr Albert HO, Mr IP Kwok-him, Mr LAU Chin-shek, Mr Ambrose LAU, Dr LAW Cheung-kwok, Mr LAW Chi-kwong, Mr LEE Kai-ming, Mr LEUNG Yiu-chung,

Mr Bruce LIU, Mr LO Suk-ching, Mr MOK Ying-fan, Mr NGAN Kam-chuen, Mr TSANG Kin-shing, Dr John TSE, Mrs Elizabeth WONG and Mr YUM Sin-ling voted for the motion.

Dr LEONG Che-hung, Miss Emily LAU and Miss Christine LOH voted against the motion.

Miss Margaret NG abstained.

THE PRESIDENT announced that there were 46 votes in favour of the motion and three votes against it. He therefore declared that the motion was carried.