ECONOMIC DEVELOPMENT AND INFRASTRUCTURE COMMITTEE

Inquiry into Mandatory Ethanol and Biofuels Targets in Victoria

Melbourne — 31 July 2007

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Mr J. Lincoln,

Mr J. Mikolajunas, and

Mr K. Black, OES CNG Ltd.

The CHAIR — Welcome to the public hearings of the Economic Development and Infrastructure Committee hearing into mandated ethanol and biofuel targets in Victoria. All evidence that is given today is protected by parliamentary privilege. You are afforded that privilege whilst you are giving your evidence, but what you say outside may not be afforded that privilege.

I ask those giving evidence to state their names and addresses, whether they are attending in a private or an organisational capacity — which is obvious in your case — and their position within the organisation. Whatever evidence is given today will ultimately go on the website. It will be public evidence and you might need to be aware of that in any comments you make. It is over to you for your presentation. We usually like to have 50 per cent of the time or more for questions.

Mr LINCOLN — These guys agreed that I would start. I am the majority shareholder of OES CNG. My other companies consist of Lincoln Consulting Engineers, OES Pty Ltd, which is in Australia. We are an offshore oil and gas engineering construction company — an engineering procurement and construction or EPC company.

I started in Australia in 1982 as an oil and gas engineer. I worked on the North West Shelf for 10 years liquefying natural gas; I worked for Esso; and I was responsible for many of the designs and installations of a lot of the pipelines throughout Australia. For much of that work I was an engineer on contract.

In 1992 I started Lincoln Consulting Engineers and became an international engineering consultant doing engineering procurement and construction management. About a year later we started what is called Ocean Engineering System, which became OES, which is an offshore oil and gas construction company. We actually became the world's leader in sub-sea pipelines. We have over 15 innovative machines in six offices around the world and we basically just reinvented the way that sub-sea oil and gas pipelines are buried.

Having been in Australia since 1980 and having four kids here, I have been pretty well set here in Victoria since 1987. I am an innovator and an investor and I thought it would be a great idea to run vehicles on CNG (compressed natural gas). I did not know much at the time really about it, other than my gas bill said I was only paying 22 cents equivalent to a litre of petrol, and so being an engineer and inquisitive, I thought, '22 cents and I am paying $1.50 for petrol? Something must be here!'. It is not rocket science, so I hired John who I had known previously. He is a scientist type, and he basically did a lot of research. We found out amazing things. Do not quote me here, but five or six million vehicles around the world were already converted; it was invented in the 1920s by the Italians. We have subsequently visited — John and I — in India a facility that was doing 2000 cars a day.

Combining the knowledge that John had learnt and what I had already known about Australia — we have vast gas reserves in this country. They find reserves in Western Australia and they just cap them. There is enough gas in some wells alone to satisfy the energy needs of Australia for 10 or 15 years, just in one well, and there are hundreds of them capped. We are sending hundreds of thousands of tonnes a month to China, to Japan. The other advantage of Australia is that we are networked; gas pipelines all throughout the east coast; most of you probably have gas in your home. We are developing compressor systems where you can actually fill your vehicles at home, at 22 cents a litre, for the cost of the gas. Obviously there is an electricity cost. Kevin will say it is a lot more than that. He is a lot more honest than I am. I am more of a salesman type. He says 50 cents a litre; we think maybe 30 or 35 is the real truth allowing for the electricity and amortisation of the equipment.

Basically you get your money back in less than a year and a half, if you install a home compressor and you convert your car. So it is a solution for the world's energy needs. Europe is going all CNG. We just got through burying a 48-inch pipeline, which is going from Iran to Europe and there is another one from Russia going to Europe. The whole of Europe is going CNG now. It is the cleanest, it is the cheapest and it is the most abundant fuel on earth. It is reasonably renewable, because you can actually put in your home a big bin and put in your sewage waste and garbage scraps and actually make it. So we are in the business now of manufacturing home compressors. We are converting petrol stations to run on natural gas. What else are we doing, John?

Mr MIKOLAJUNAS — We are developing compressors of our own type both of the home compressor size and for the larger fuel stations. We want to set up a network of fuelling stations for the public to augment the domestic compressors. We are converting vehicles, we are trying to set up a strong conversion procedure that means that vehicles are reliable and that our customers are going to be able to get into a vehicle, drive with natural gas and know that the vehicle is working, and if not that they can come back to us for assistance.

Shall I go on now, John? Did you have anything else to say?

Mr LINCOLN — I do not think that generally I have anything else to say.

Mr MIKOLAJUNAS — John mentioned that there are 6 million vehicles in the world at the moment running on natural gas. Less than a decade ago that was 1 million. The international natural gas vehicles group estimates that that will be 65 million vehicles by 2020 with the current 18 per cent growth rate. So it really is taking off and Australia is one of the only countries that does not seem to have grasped the fact that natural gas is, one, so clean. It produces far, far less nitrous oxide and sulphur dioxides and almost no particulate matter, which not only is a pollutant but has a huge effect on our public health, as we all are aware. In addition to that, as John has mentioned, are our vast resources. We have approximately 100 years of gas available at this stage.

If we go on to compare it to other available fuels, it is also one of the safest fuels you can use, for a number of reasons. One is because it has a very narrow range of flammability — that is, 5 to 15 parts per million. So when it is pure, it is not flammable. In addition to that, the equipment that is used in vehicles and in fuelling stations is highly engineered; far more engineered than other equipment — for example, a petrol tank in a car can be punctured with a bit of metal, as can an LPG cylinder. A cylinder for natural gas cannot be. In fact it has to withstand being shot by a high velocity bullet without exploding to be able to be used as a CNG cylinder — they are highly engineered.

The pricing is very, very stable. With alternative fuels we want to move away from reliance on oil imports. This gives us national security for our fuel. It means that political unrest in the Middle East or Asia or wherever will not affect us because we will be relying on our own fuel supplies. The pricing is around 20 to 33 per cent of the current cost of petrol and diesel and approximately half that of LPG on an energy equivalent basis. It can be used in any internal combustion engine — —

Mr LINCOLN — Can I just explain that, because probably most people do not understand. When you look at the price of LPG per litre compared to the price of petrol, you are not looking at the same basis because LPG weighs a lot less than petrol. Actually what you have to do is add 30 per cent to that price for an equivalent energy basis, which most people are not aware of.

Mr MIKOLAJUNAS — Natural gas can be used in any internal combustion engine. To summarise what I have just gone over, it is the cleanest fuel available to us on earth; it is the cheapest available in Australia at this time and it offers us the best potential for a secure fuel supply for the future.

For some reason it has been largely overlooked in Australia. As John said, Europe is moving into it with targets set at 20 per cent alternative fuels, of which half will be natural gas, by 2020. Canada is producing some amazing equipment. You have got India and Pakistan. South America has got something like 3 million vehicles at this stage. The whole world is moving towards natural gas, and it is the inevitable step we will take. I just hope that we can include it in the alternative fuels mix at this stage, because currently it is being overlooked.

Mr THORNLEY — John, you are talking to the natural gas and CNG fans on the committee, so I guess what we are keen to do is to probe what the barriers are to further adoption. You are preaching to the choir on this good idea.

Mr MIKOLAJUNAS — Let me pass you to Kevin, because he is going to address the actual terms of reference, if you like.

Mr BLACK — If I can give you a little bit of background, I have been working on natural gas vehicles since 1983 in terms of research and have been working full time in the natural gas vehicles field since 1996. I initiated the first natural gas vehicles project in Australia that involved public access, which was the Liverpool City Council natural gas vehicles project in 1996, and we had the first public refuelling station in Australia installed in Liverpool in New South Wales at that time. I have lived with the fuel in Australia for the last 10 years.

Mr LINCOLN — I was going to introduce you, but when I introduced John he just took off and I let him go. I apologise for not introducing you before.

Mr BLACK — That's all right. I have worked as a consultant, both in Australia and overseas, and we developed our own vehicle conversions and various other products. For instance, using the same system that we developed ourselves in Australia we have done everything from a 125 cc single cylinder motorbike to a 15 litre diesel truck using the same system, because it is so interchangeable. I have actually seen a CNG-operated

chainsaw. The Russians have LNG — liquefied natural gas — and have been using it in a Tupolev 145, I think it is, the equivalent to the Boeing 737, for about 10 years now. It is a highly versatile fuel.

Barriers to the introduction of CNG have been basically the need for a refuelling infrastructure. When we initiated the Liverpool program, the Federal Government put up $3.8 million and then doubled it to $7.6 million for a CNG infrastructure program.

Mr LINCOLN — You advised that you were working for the Liverpool council at the time?

Mr BLACK — Yes, I was.

Mr LINCOLN — Kevin initiated the first public filling station, which is still in operation today. It is the only one!

Mr BLACK — We did that in 1996, and when we were starting to see some progress the Prime Minister, Mr Howard, went across to the Kyoto conference and announced that they were introducing the CNG infrastructure program as their contribution to Kyoto. During the GST negotiations the Democrats leveraged their support with support for alternative fuels, particularly CNG. Unfortunately there were a number of things that happened, as they do in government, where policy settings changed the fuel excise setting. Politics sort of reared its head and certain primary industry lobbies, which had influence within government, looked at different emphases on their alternative fuels policies, and the structure of the alternative fuels conversion program was targeted at vehicles over 3.5 tonnes, which were diesel vehicles.

The problem is that out of the 13 million vehicles on Australian roads, 350 000 of them qualified to be considered under that program. The diesel engine technology was just not sufficiently advanced at that time to enable us to move forward. Although funds were allocated to two of the major gas companies to put in 16 refuelling stations, they decided that there would not be enough customers, and anyway it was not their core business anymore and they pulled out. Essentially all of the funds that were allocated to CNG projects in 1996 and 2000 effectively either got rolled back into consolidated revenue or transferred to ethanol and biodiesel.

The policy settings for CNG at that time were not accurately targeted, and as a result we were not able to move it forward. In fact, we are further back now than we were in 1996 in terms of that, except for the fact that all capital cities, except Melbourne, are now committed to greater proportions or have a total commitment to CNG buses. Melbourne is not included because there is no longer a government bus service.

The CHAIR — You are going to have to excuse me. I am going to have to cut across and ask you to sum up so that we can ask questions. Can you please quickly get over the key points of your submission so we can get to questions?

Mr BLACK — Yes; I will quickly address, then, the specific terms of reference about mandatory targets, because I think that is an area that we need to talk about. We believe that targets in themselves are effective tools for driving change. The problem with mandatory targets is that you have to be very sure about what you are trying to achieve with your targets, whether it is to use indigenous fuels or clean fuels or whatever. You also need to be very clear about who you are directing those mandatory targets towards. It is almost impossible, from international experience, to set a mandatory target unless you know who is going to be affected. Frankly, if you are talking about vehicle manufacturers, they cannot meet targets if there is no fuel available et cetera; fuel manufacturers cannot, if there are no vehicles. So in the past mandatory targets have generally applied to government. Governments have actually set mandatory targets for themselves so that percentages of their fleet are converted to alternative fuel vehicles at various times.

We would say the other question is about how you address what you are going to mandate. What is an alternative fuel? Is a 10 per cent ethanol mix in petrol an alternative fuel? Is E85 more an alternative fuel? Is B5, B20, B100? Where do you draw the line? Do you draw the line at a dual-fuel LPG-petrol or a bi-fuel CNG-petrol vehicle? Or do you rely only on dedicated vehicles? Because then it is not only the target that you are setting in terms of vehicles but also fuel use that you need to consider. You can have a mandatory target for a CNG vehicle that also runs on petrol and run it 100 per cent of the time on petrol, if the owner chose to do so. They are things that we believe need to be addressed in targets. We will expand on that in our formal response to the committee's terms of reference.

The CHAIR — Thank you very much. If you were writing our report what would be the three key items that you would put as recommendations?

Mr LINCOLN — If we were writing your report?

The CHAIR — Yes.

Mr LINCOLN — I would only like to talk about CNG, okay?

The CHAIR — Right; that is fine.

Mr LINCOLN — I am not an expert on all the other alternative fuels.

The CHAIR — I presumed that is what you would cover.

Mr LINCOLN — I would think that it would be quite obvious that CNG is the right choice, that all governments should be focusing on that. It is about abundance, cost, safety, and it is the cleanest fuel.

The CHAIR — But how would you recommend that it is implemented, because we are going to — —

Mr LINCOLN — What can government do to help?

The CHAIR — Yes, if you were the minister responsible?

Mr LINCOLN — For one thing, for LPG there is a $2000 rebate for people who convert their cars to LPG, but nothing for CNG.

Mr MIKOLAJUNAS — That is a really big one. We have actually approached the Federal Government on that and pretty much been given the answer that it is not at this stage involved in the alternative fuels that are being considered. This is one of our big concerns.

The CHAIR — Okay, so that would be your first recommendation?

Mr LINCOLN — Public awareness. I do not think the public is aware — —

Mr BLACK — The big recommendation I would make is that we need government support to get that refuelling infrastructure in place.

The CHAIR — If you were the minister in the state government, how would you ensure that that occurred?

Mr MIKOLAJUNAS — No. 1, I think it needs to have equal footing with other alternative fuels. The other is that we need to give rebates, whether it is tax or lump sums, to people who are willing to take the chance and the risk of moving forward and having a refuelling station. We are investing a huge amount of money into refuelling stations and into the development of compressors, and we know it is a big risky area, because it is a chicken and egg scenario. We are having to move so many fronts forward, and we have no funding support, and in fact there is none listed. So financially, subsidies for our customers would be a fantastic help and subsidies for people who are willing to take the risk to set up a refuelling station.

The CHAIR — Can I just take that a little further: presume you are the minister, and we are trying to implement what you want. What from your perspective needs to happen to get these sites, because where I am coming from I think that at the moment most of the sites are owned by petrol companies.

Mr MIKOLAJUNAS — And that is fine.

The CHAIR — So why would they go down your path?

Mr MIKOLAJUNAS — Overseas petrol stations — —

Mr LINCOLN — There are many, many independents. There are perhaps 150 or 200 petrol stations that are owned by independents, not owned by the majors.

The CHAIR — So it could be independents?

Mr MIKOLAJUNAS — It can be independents, but in addition to that, in Europe the oil companies are actually supporting natural gas because a large amount of their assets are in natural gas. They also see that oil has a limited future, so they want to move in that direction as well. The fuel stations we have seen overseas are not dedicated CNG; they are petrol, LPG and CNG.

The CHAIR — Right.

Mr MIKOLAJUNAS — If we were able to set up small, low-cost start-ups for fuel stations and with some support for those people willing to take that risk with us, we would be able to — —

Mr LINCOLN — Hypothetical situation. We want to start putting CNG stations at petrol stations so we talk to the owners. They do not know what to say. They say, 'Great. You pay for it, you put it up and when cars come in we will fill them up and make a profit'. They have no problem with that. But since there is no infrastructure in place at all, nobody knows what sort of government problems or red tape or restrictions will apply. We are going off the walls dealing with — which authorities here?

Mr MIKOLAJUNAS — Energy Safe.

Mr LINCOLN — It does not know what to do because nobody has done this before, but it is very helpful. It is not impossible, so long as we prove that everything we are doing is safe. There is no legislation in place or rules or regulations to govern this. There are lots for petrol stations, but when you are handling something like natural gas there is really nothing in place. The approval process is totally vague. We do not know who to apply to.

The CHAIR — Okay. This is helpful. In terms of clarity you need the state government to look at regulation — —

Mr MIKOLAJUNAS — Yes.

The CHAIR — I presume you would need that fairly promptly?

Mr MIKOLAJUNAS — Yes.

The CHAIR — You are currently trying to get sites established?

Mr MIKOLAJUNAS — That is correct.

Mr BLACK — We have the experience we had in New South Wales in terms of development approvals and WorkSafe practices and what have you, that we can import into the Victorian system. It has all been done before. It just has not yet been adopted in Victoria.

Mr MIKOLAJUNAS — Can I have just one more desire of the minister? A natural gas tariff for CNG users would be an extremely helpful thing — that is, if you are using natural gas for your vehicles. There are a number of breaks that should be given to people using natural gas. One is a lower tariff. The gas companies we have spoken to — we recently spoke to Lee Holmes of TRU, and he feels it is a really important thing to give a slightly lower rate to people using CNG in vehicles to encourage them to adopt it and to give them that real saving on use of natural gas. That is one thing — a tariff. That in combination with the subsidies will help us encourage people to take this up.

The CHAIR — Thank you. That has been helpful from my perspective.

Mr THORNLEY — I guess I want to take a step back and understand just a bit about the economics. I understand there is a range of regulatory and other problems and again there is a vertical market value, which is that people will not convert their cars until they can get fuel and people will not sell the fuel until the cars are converted. Let me understand — what is the cost of just a standard vehicle conversion?

Mr BLACK — To convert a modern vehicle and to ensure that you retain all of the engineering functionality — for instance, traction control, electronic stability control — about $4500. It is about 50 per cent more than an equivalent LPG conversion, but with LPG you actually have to switch most of those functions off

when you are driving on LPG, because most LPG systems work — if you look at it from the current point of view, if you put LPG in a Holden Commodore today, basically what you do is you switch off all of the you-beaut 2007 engine management emission control equipment and switch on a 1950s carburettor.

Mr THORNLEY — What is the payback? You have done the maths.

Mr BLACK — About 60 000 kilometres for a passenger vehicle.

Mr THORNLEY — Right; so that is from one to two years. Now, what is the site installation cost for a petrol station?

Mr BLACK — Depending on how large it is — but for a basic single-pump, two-hose installation as an initial installation that is capable of doing say 60 to 80 vehicles a day, around $400 000.

Mr LINCOLN — We have actually quoted $250 000 starting from scratch. We can do it for $250 000. We have quoted that already to Stonnington council and Safeway in New South Wales.

Mr MIKOLAJUNAS — In addition there is also the factor that to start off with we have developed a modular system. You do not need in the early stages to be doing 80 vehicles a day at a service station, because they are not there. So our plan is to start off with smaller units that can cope with a smaller number of vehicles and therefore have an initial cost of probably around $250 000. As the customers become available, as people get their vehicles converted, we can either double up on that or take out the smaller compressor and put in a larger one, and the same with storage.

Mr LINCOLN — Or we can just add another compressor. For $50 000 cost to us we can add another compressor, which does how many extra cars a day?

Mr MIKOLAJUNAS — It is about 40 on a 12-hour day.

Mr THORNLEY — So to get some scale into the thing, the quicker way probably would be to go to the heavy vehicle guys first, yes?

Mr BLACK — That was in fact where we fell down last time. With the heavy vehicle guys there are a couple of issues that you need to consider. The first is that the conversion of a heavy vehicle, a diesel truck, is very expensive. You basically have to scale back the compression ratio of the truck. You have got to re-engineer it. You have got to put a spark ignition system into it. It will cost you $25 000 to $40 000 to do the conversion. But then you have got the problem that, because CNG is so well engineered in terms of safety, the tanks are quite heavy, and the more tanks you put on to get more range, the less payload you carry, so it becomes — —

Mr THORNLEY — So it has got to be a short-haul, heavy vehicle?

Mr BLACK — It has got to be short-haul, heavy vehicles.

Mr THORNLEY — Hence the buses.

Mr BLACK — And the limitation there is that there are probably only 80 000 or 100 000 of them in Australia.

Mr MIKOLAJUNAS — Can I make the point that what we are doing, we recognise that it is very difficult to get this fuel accepted on the domestic scale without it having been driven on another front. That is, we are moving forward on fleet vehicles, where we can take a company or a council where there are savings to be made on the whole fleet using that fuel source. But our company's aim is to make this fuel available to the common person, to the public.

Mr LINCOLN — There are people doing forklifts and warehouse vehicles. They are doing that already. I think there are about three. One company here, TRUenergy, I think has done a couple. That is fine. I want to do every car in Victoria, so I am putting up five petrol stations and I am selling these units that can go on people's homes. For less than $3000, maybe four at max, you can buy a compressor and you can stick it in your home. I do not think it is $4000 to convert a vehicle. We will do them for three. For $7000 you have a complete home compressor and your car converted, and the payback will be maybe a year or a year and a half.

Mr MIKOLAJUNAS — And what that offers is — —

Mr THORNLEY — So that gets you around the distribution problem. They are running off the gas grid at home.

Mr MIKOLAJUNAS — That is correct. Not only that, but that means the person that is driving in to work every day looking at that fuel price, dreading to see it go up and down, not only do they not have to worry about that price, they do not have to pull into that service station while there is a queue of 20 other vehicles. They can go home, be with their family, plug the vehicle in and in the morning they get out and they drive to work.

Mr THORNLEY — What is the range in a car?

Mr LINCOLN — This is the biggest disadvantage. You have hit right on it.

Mr MIKOLAJUNAS — This is the biggest disadvantage with natural gas, that the range at this stage it is about half of what you can get in other fuel tanks.

Mr LINCOLN — About 100 kilometres.

Mr MIKOLAJUNAS — Obviously the bigger the cylinder is, the more range, and there is technology being developed to try to improve on that.

Mr LINCOLN — You need to fill up more frequently.

Mr MIKOLAJUNAS — But that is where the home compressor is an advantage.

Mr BLACK — I have been driving a natural gas vehicle for 10 years now. I have one of the, I think, eight in Australian at this time — actually, I have three of the eight. We find that with a single cylinder, a single tank about the size of an LPG tank in the car, we can get around the 240 kilometre range — 240 to 250. But the difference is in the cost.

Mr LINCOLN — Is this a big tank, Kevin, or two big tanks?

Mr BLACK — This is one tank.

Mr LINCOLN — One big tank?

Mr BLACK — A 90-litre tank — 90-litre water capacity. I used to drive from Liverpool in Sydney to Canberra on a regular basis, and on a regular basis we would drive down on natural gas and drive back on petrol, and the price differential was somewhere between $10 for natural gas and $50 for petrol.

The CHAIR — I think we are all thinking now where can we put this in our own homes.

Mr LINCOLN — I would just like to say one thing. There is a bit of contradiction between — Kevin has joined us recently, and for a year John and I and other people have done our own research and calculations. Then Kevin came on board, and he sometimes has different numbers than we have.

Mr MIKOLAJUNAS — But we are focusing.

Mr LINCOLN — I am not saying that he is wrong and we are right or he is right and we are wrong

Mr BLACK — I was talking about the comparison between theory and practice.

Mr LINCOLN — Perhaps the real truth depends on the price of petrol, and it depends on the type of car.

Mr THORNLEY — This is all new stuff. The numbers are going to move around.

The CHAIR — What is clear from what you are saying is that, if you are travelling at least 100 kilometres and you are residing, for example, at a home and you have that installation in your home, it is extremely cost efficient. That is what you are saying.

Mr MIKOLAJUNAS — Absolutely.

The CHAIR — And if you are looking at the interface councils around Victoria, it would not be uncommon that people would be doing 100 kilometres, and there are great cost efficiencies. Whether it is 200 kilometres or 100 kilometres. Your argument is that Councils spend in order of half a million a year on fuel with savings of around $350 000 a year. Perhaps we could follow up with Stonnington Council on some figures that make its clearer.

Mr MIKOLAJUNAS — We can certainly make them available. We are at a point in time with them where we are going through collecting all that data at this stage.

The CHAIR — That would be helpful.

Mr MIKOLAJUNAS — We can make them available to you when we get them.

Mr CRISP — A question on notice: when you come back to us, I would like to understand more about how the commonwealth taxing and excise works with this fuel because in other areas there are significant taxes and charges, and this fuel source does not come through the process where those taxes and charges can be identified. I would like to see where you fit in that, but not now; that will take some time. It needs to be written down, because if we are going to have a disagreement with our commonwealth colleagues, we need it in writing.

Mr BLACK — I have prepared some graphs showing the impact of the introduction of fuel excise and how it will impact on pricing between now and 2019.

Mr CRISP — And collecting, because if someone is metering and charging, if they are doing it at home I think we would have some issues.

Mr BLACK — It is like with the biofuels, do you pay excise if you are doing it at home. These are issues that the Federal Government has never addressed.

Mr CRISP — I know.

Mr LINCOLN — There is no excise on LPG, for example, because they wanted to create a market to get rid of it because there was an excess amount. It is taken out of oil to stabilise the oil.

Mr BLACK — It is better to sell it than flare it off at the refinery.

The CHAIR — I have a couple of questions needing short answers. The space a CNG tank takes in a normal passenger vehicle, what are we looking at?

Mr MIKOLAJUNAS — Pretty much the same as an LPG.

Mr LINCOLN — Unless you want to go very far and then you might have two tanks.

Mr BLACK — It is an interesting thing, though, that in Europe and in Asia, and in Iran now, vehicle manufacturers are designing vehicles for CNG, and they are putting the tanks under the floor or concealing them within the structure so that they do not take up that boot space.

The CHAIR — I think you have answered the question on CNG engines compared with conventional petrol engines in terms of reliability and maintenance; you would be saying there is no problem with that?

Mr BLACK — Exactly the same. Possibly CNG is a little less wearing on the vehicles because it has fewer foreign objects in it.

Mr MIKOLAJUNAS — They note that buses running on CNG are far quieter.

Mr BLACK — CNG actually runs about 70 per cent quieter than diesel.

The CHAIR — And I take from what you are saying that there are not additional costs to business or the general public if CNG produced vehicles were widely available?

Mr BLACK — No. There would be obviously an increased capital cost until you got economies of scale in production, but in terms of operating costs and maintenance costs, no, there would be no increased costs.

The CHAIR — And where it is being done in Europe, would it be fair to say there are no additional costs?

Mr BLACK — Yes.

The CHAIR — Does anyone else have any other point they want clarified? Many thanks. You will be provided with a copy of the transcript within a fortnight. You are free to make corrections to any typographical errors but not to the substance. If, in checking the transcript, you find there are any additional points you want to make in relation to pricing, given the comment from Mr Lincoln, you could perhaps add those to your submission, because once figures are put in, they are put in; but you can clarify that in your submission.

Mr BLACK — We will do that.

Mr MIKOLAJUNAS — Thank you.

The CHAIR — It was very interesting.

Mr MIKOLAJUNAS — It is very exciting for to us to hear that this is happening.

Witnesses withdrew.