ECONOMIC DEVELOPMENT AND INFRASTRUCTURE COMMITTEE

Inquiry into Mandatory Ethanol and Biofuels Targets in Victoria

Melbourne — 27 August 2007

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The CHAIR — Welcome to the public hearings of the Economic Development and Infrastructure Committee Inquiry into Mandatory Ethanol and Biofuels Targets in Victoria. All evidence taken at this hearing is protected by parliamentary privilege. Comments you make outside the hearings are not afforded such privilege. Could you please state your name, organisation, position within the organisation, and a business address. Thank you.

Ms ARCARI — My name is Paula Arcari, of level 4, 267 Collins Street, Melbourne. I am here today representing ICLEI Oceania in my capacity as the Biodiesel Project Manager.

The CHAIR — Thank you. Over to you.

Ms ARCARI — Good afternoon, everybody. At the time of this inquiry the results of the DSE-funded biodiesel research undertaken by ICLEI have not yet been published, or their biofuel policy. For this reason, the views and opinions that are about to be expressed in this presentation are not necessarily those of ICLEI, the State Government or the AGO at this time. The presentation is based on a year of research involving 50 local governments and over 20 industry stakeholders to determine the nature of local government uptake of biodiesel in Australia.

I will first provide some background information before focusing on three key points that appear to be central to the consideration of a biofuels mandate. There are 19 local governments across five states with experience of biodiesel uptake, representing 9 per cent of all councils currently participating in ICLEI's Cities for Climate Protection program. Three of these are in Victoria, and a further three Victorian councils are about to enter the final stages of project implementation. Four councils in Australia, including Bendigo, run their entire depot fleets on biodiesel, involving between 140 and 300 vehicles. So what is motivating these councils to switch to biodiesel? My research suggests that the primary motivation is to reduce emissions of greenhouse gases known to be contributing to the greenhouse effect and climate change in general. Reduced pollution is also a significant motivator, with biodiesel emitting up to 91 per cent less of certain gases implicated in a range of cancer-related deaths and illnesses as well as cardiovascular and respiratory diseases. Reducing reliance on fossil fuels is also important to local government. Australia currently meets 50 per cent of its fossil fuel needs through imports, and this is expected to increase to 60 per cent by 2010. Of least concern to experienced councils is financial savings. However, for councils currently undertaking uptake, this is a more significant motivation, indicating increasing concern with the accurate assessment of risks and benefits, both economic and environmental. The financial implications of switching to biodiesel are not the same for all councils. If suitable infrastructure already exists, there are no additional costs beyond cleaning the storage tank prior to introducing biodiesel. There are no conversion costs for normal diesel vehicles. Fuel costs are approximately cost neutral over the long term, and some suppliers have been maintaining prices lower than those for fossil diesel.

New infrastructure such as storage tanks if required can be the costly, and lack of funding can be a considerable barrier for local governments, particularly when the investment is for a trial. Some councils have successfully secured funding for infrastructure as well as developing joint purchasing agreements to create leverage with suppliers. Some other barriers to biodiesel uptake that local governments have faced, in addition to funding, include internal resistance, a lack of reliable and consistent emissions data, uncertainty around the environmental impact and sustainability of the industry, unreliable fuel supplies, lack of clarity in vehicle warranties, and unsupportive and complicated tax laws.

With regard to the future outlook for biodiesel in local government, the majority of surveyed councils believe that it will play a significant role in council's future fuel usage in 2010. However, one-third of councils believe it will not, and the reasons they gave for this focus on three key issues. Firstly, the impact of biodiesel feedstocks; secondly, the question of greenhouse gas abatement; and thirdly, sustainability of supplies. These issues are central to the first two key points of this presentation. The first concerns feedstocks, the second focuses on policy, while the third key point addresses the question of the mandate itself based on these.

My first key point concerns feedstocks. The primary feedstock oils used in the production of biodiesel in Australia are tallow, used cooking oil and canola. Analyses from the CSIRO estimate that Victoria could supply 20 million litres of used cooking oil to the biodiesel industry and a further 134 million litres in the form of tallow, a total of 154 million litres. If all 79 Victorian local governments were to use the same quantity of biodiesel annually as the City of Greater Bendigo, there would still be over 111 million litres available for other users. There is also a further 140 million litres available from Victoria's entire oilseed crop. However, the viability of using limited arable land

and water supplies to provide oilseed for fuel has to be seriously considered, especially with the prospect of worse water restrictions to come. Furthermore, competition from fuel manufacturers could lead to elevated market prices for these oilseeds, which could have flow-on effects for the price of food commodities. An increase in the price of domestic feedstocks, or their limited availability, could also lead to an increase in the demand for cheaper imported oils. The primary feedstock oil currently being imported is palm oil. This oil is sourced from plantations in Malaysia, Indonesia and Central America where it is responsible for large-scale deforestation, destruction of habitats, and the draining and burning of peatlands causing the release of millions of tonnes of carbon into the atmosphere every year.

The round table on sustainable palm oil established in 2004 counts BP, HSBC and IKEA amongst its members. It recognises the expansion of palm oil plantations as giving rise not only to environmental degradation but also to social conflicts and loss of livelihoods. The Netherlands Government — Europe's fourth largest importer of palm oil — announced in April that it is no longer supporting the use of biofuels sourced from carbon-rich soils. A UN report on bioenergy also released in May this year warns that — and this is a quote:

> unless new policies are exacted to protect threatened land, secure socially acceptable land use, and steer bioenergy development in a sustainable direction … the environmental and social damage could .. outweigh the benefits.

Imported palm oil is already being used in the production of Australian biodiesel and, without regulations to verify its source and sustainability, there is no guarantee that its use is resulting in a better outcome for the environment than fossil diesel. Sixty-six per cent of surveyed councils are opposed to using fuel sourced from palm oil. A further 10 per cent would only use it if it came from a certified sustainable source. Similarly with regard to domestic feedstocks, if manufacturers regularly have to source these feedstocks from interstate, the associated transport emissions may negate any calculated benefit to the environment. Without regulations around the source and production of all biodiesel feedstocks, there is a danger that measures to increase its uptake will amount to greenwash, where the attraction of biofuels' green image overshadows their true impacts.

Before considering the introduction of a mandate it is recommended that the following regulations be put in place to ensure that the industry develops along best practice guidelines. The first is a certification system to regulate the source and production of feedstocks. The UK Government recently designed the world's first reporting and certification system for biofuels, which may provide a suitable model for an Australian system; secondly, a legal requirement for biofuel producers to know and make available to customers the composition of their fuel and the source of feedstocks; and thirdly, emission factors that include imported feedstocks and reflect the full life-cycle impact of all feedstocks. These regulations would naturally favour the emergence of more environmentally sound biofuel technologies and therefore support domestic research and development of these feedstocks. It has to be said that there are promising developments emerging in terms of new biodiesel feedstocks, and although it is likely to be 5 to 10 years before most of these technologies are commercially viable, there is a company in Victoria hoping to have their algae-derived biodiesel available in two years. This first key point concerning feedstocks sets a recommended framework for my next point, which focuses on policies.

Lack of reliable supplies is a major obstacle to local government uptake. For a mandate to be effective and fair, the supply side of the equation needs to be addressed, and supportive policies can play a major role. In many rural and remote regions freight costs from the nearest supplier makes biodiesel economically prohibitive compared with fossil diesel. Even if B100 — that is, 100 per cent biodiesel — is locally available, current tax laws discourage its uptake as tax credits can only be gained for blended biodiesel. There are blending regulations, fuel standards and warranty terms that are additionally prohibitive and also tax laws for fossil fuel that act as perverse incentives to use more, further discouraging the uptake of alternatives.

As well as policies to support the production and availability of biodiesel to consumers, it would be wise to create a price control mechanism to pre-empt the potential for market competition to drive up feedstock prices. This would create a reliable and attractive pricing structure in which users and the industry would not be disadvantaged by a mandate. This would also guard against the possibility of rising oilseed prices affecting domestic food commodities and perhaps allow priorities around the type of production methods to set the course for biodiesel uptake rather than economic forces.

The broader framework in which the mandate is to sit should also be assessed if it is to have more than a limited impact. If the intention of the mandate is to reduce the environmental impact of the transport sector and reduce reliance on fossil fuel resources, there need to be associated policies to address the nation's overall fuel efficiency and travel demand management. The broader policy context needs to be considered and perhaps revised to create

an integrated, fully aligned transport approach that provides support for new policies and increases their effectiveness.

The following policy changes are recommended: a revision of current fuel tax laws, standards and industry incentives and support, including for microbusinesses, to align with and make possible plans to increase the uptake of biodiesel. Secondly, associated policies to increase fuel efficiency and travel demand management. This would foster the development of new domestic industries, create jobs and provide an environment where investment in the research and development is encouraged. So far I have covered the necessity of a regulatory framework to monitor and control the environmental impact of biodiesels and associated policies to support the growth of a sustainable industry. Within this context my final point focuses on the mandate itself and proposes a sector-based approach. There are clear benefits of using biodiesel. It reduces pollution, it degrades four times faster than diesel; it is non-toxic and has a flashpoint more than double that of diesel. If feedstock regulations, as recommended in my first point, can be put in place to show that reductions in greenhouse gases are viable and production methods are environmentally acceptable, an increase in biodiesel uptake could have a positive impact in specific higher diesel usage environments, such as urban and semi-urban areas — an approach that has been suggested by several surveyed councils. Other positive outcomes include encouraging behaviour change, economic diversification and creating a national framework that is more supportive of new fuel technologies.

Domestic and local supplies of current feedstocks are fairly limited. However, production capacities have not nearly been reached, so there is considerable scope to increase the demand side of the equation. Focusing the mandate on certain sectors provides the industry with the guaranteed market stability it needs to become established and allows time for the industry to develop in an appropriate way. As the next generation of feedstocks becomes viable, other users might then be targeted and the industry should be mature enough to handle this increased demand using environmentally sound feedstocks and production methods. The initial target sectors, supported by appropriate policies as in my second key point, would benefit from being seen as market leaders, and focusing the mandate on these sectors would ensure that the pollution benefits of biodiesel were maximised through incorporating high-diesel users in urban and semi-urban areas. It is suggested that the mandate initially focuses on the following sectors: local and state government; the public transport sector; emergency services; freight companies; and military services. There is precedent for this in the US, where the use of 20 per cent biodiesel or B20 in all US navy and marine non-tactical diesel vehicles has been mandated since 2005. A phased-in mandate, up to a minimum blend of 20 per cent, or B20, over three to five years would provide time for the industry to evolve and the market to adapt. The associated policy support outlined in my second key point would also allow the use of higher blends in areas where feedstock supplies and industry infrastructure can support this.

In summary then, subject to the conditions of my first key point, which are the establishment of regulations and controls around feedstocks, and with the supportive environment created by policy changes outlined in my second key point, it is recommended that any proposed mandate consist of a gradual phasing-in of a minimum 20 per cent mandate over three to five years focusing on the previously mentioned sectors with incentives targeted at these sectors. I would like to stress again that such a mandate is unlikely to have positive environmental, social or economic outcomes without appropriate steps being taken to first address the issues of feedstocks and related policies. The full report based on my local government research will be available to all Australian councils participating in the Cities for Climate Protection program and also selected stakeholders soon. Thank you for your time.

The CHAIR — Thank you very much. That was very clear. Issues specific to councils — could I go to those please? For example, local planning regulations — how do you think they affect the development of a biofuels industry?

Ms ARCARI — Local planning for their own council usage? I have not come across any councils that have had a problem with that at all. Either they use existing storage tanks on their depot ground, in which case the plannings are already there or they go through the planning permissions to have another site, but that is very rarely the case because, if councils are using fuel, they already have diesel storage facilities.

The CHAIR — Then for sites outside the council depots — let us pick an imaginary shire; Black Shire we will call it. It wants to use it in its own council depots. What about other planning laws in Black shire might affect the biofuels industry? Have you had them raising problems in that regard with local planning laws?

Ms ARCARI — No.

Mr DAVIS — Just let me understand this. If you put aside your perfectly sensible caveats about the security or the background of suppliers coming into our biodiesel council, for want of a better word, do you think the costs they encounter are no more than they would encounter otherwise?

Ms ARCARI — It depends. There is no energy conversion required with biodiesel. The only costs upfront are if new infrastructure is required. This can be the case if their existing infrastructure is quite old or if the tanks are underground and difficult to access and therefore clean properly, or if the tank is not big enough. There are several reasons.

Mr DAVIS — What about the blending? Is there a cost to that?

Ms ARCARI — No blending can be done on site. That is one of the prohibitive blending regulations currently in operation. Blending can only be done on a licensed site, so as well as a licensed producer a manufacturer has to also be the blender. This is where people producing B100 are at a disadvantage, because they cannot supply their B100 product to a customer; they have to either have the blending capabilities themselves or then pass it on to a blender, and the users cannot actually get the tax credit from using B100 either.

Mr DAVIS — Counting the infrastructure costs out, do you think the costs of supply can be such that there is no net cost to council at all?

Ms ARCARI — The overall experience of councils has been that long term it works out about cost neutral. That is taking into account times when it can be a little bit above diesel and then times when it is below. On average they have all said it is pretty much cost neutral. In some cases they have actually said it is cheaper, because of some suppliers maintaining their price deliberately below that of diesel to attract and retain customers, but obviously that is not sustainable in the long term.

The CHAIR — You mentioned B100. If you were writing our report, what recommendation would you make in relation to B100?

Ms ARCARI — B100 can be used — and it is used in many cases in northern Europe — and obviously results in greater greenhouse gas reductions, but you actually get greater greenhouse gas reductions by using that B100 — say 100 000 litres of B100 — to produce 500 000 litres of B20. You actually get slightly lower greenhouse gas benefit by blending the B100. But that is again with my caveat: how are you going to calculate that greenhouse gas reduction?

Mr TEE — You have talked about the difficulties that councils have found, and one of your recommendations is that we use essentially that model and roll it out to emergency services vehicles and so on. Would there be the same difficulties in terms of storage facilities and so on? Have you had a look at that at all for the other areas that you recommend we have a look at?

Ms ARCARI — Do you mean for their storage of it or for the supply?

Mr TEE — Their storage, supply, internal resistance — are they the same sorts of issues that are going to be found across the board when you have a look at other areas?

Ms ARCARI — There could be. Part of my research has been to look into project implementation and success factors for that — looking at barriers and how to overcome them. Certainly internal resistance has been one for a few councils. That is largely based around lack of knowledge and misinformation about the fuel's operability and performance — which are easily addressed through education. In terms of storage facilities, for certain of those sectors it would be attacked from the supply side of the equation, because I would imagine these services normally get their fuel delivered, so that is where the supply infrastructure really needs to be supported with some associated policies to ensure that there are guaranteed supplies available. It is a sort of chicken-and-egg situation, where you have to have a guaranteed demand to support these fledgling industries to get up and running but you need some policy support to maybe see them through that initial phase, where diesel infrastructure, already being in place and available, has a bit of an advantage.

Mr CRISP — In your analysis and working with councils, environmental benefits were obviously the key driver. Did you look beyond that to local benefits and supporting a biodiesel infrastructure and industry within the communities?

Ms ARCARI — Definitely. One very good example of this is Newcastle council in New South Wales. They were one of the first councils, in 2002, to take up biodiesel. They did this by supporting a local industry that was not actually producing biodiesel itself — they imported it. Over the next year or two through them importing biodiesel in Newcastle, trialling it and demonstrating its applicability, they supported this industry enough that it is now one of Australia's leading biodiesel producers and is successful and manufactures and supplies its own biodiesel. There are local examples of councils trying to support local microbusinesses to become established and supply biodiesel. Most recently one of them failed through lack of funding, which I see as one of those bridging gaps, where they just did not have the guaranteed support of a demand side to see them over the initial setting. Bendigo Bank is currently doing a large project involving the community, setting up a cooperative sort of approach to support the development of a local biodiesel plant. So it is educating the community and establishing a market and supporting the development of that.

Mr CRISP — Because you have an Australia-wide view, are there other states where there are incentives or support in place from state governments that assist in these projects?

Ms ARCARI — Not currently, no. No, not specifically.

The CHAIR — That is the positive side. What would be the major constraints?

Ms ARCARI — I see the major constraints as ensuring sustainable production methods and feedstocks. I would say that was no. 1 in going down this road, because it is already being shown in Europe that they are in many cases putting the brakes on a lot of the momentum that has been built up in the last few years. We are now reaching a point where some of that is being reined in, and they are looking again at the methodology rather than just ruling it out, so they are having to bring in these regulations now.

Mr TEE — In terms of that European experience, does that include increased costs for farmers who rely on the feedstocks to feed their animals?

Ms ARCARI — It has been happening, yes. The precedent for that is — I do not know so much about the agricultural side, but this year in Italy, for instance, the price of pasta has risen 20 per cent because of competition from biofuel manufacturers for the wheat. A similar thing happened in Mexico. The price of corn meal doubled, and they actually had protests and political problems during that time.

The CHAIR — I have one completely different question that I have not asked anybody else. You talked about the gathering of used cooking oil. In your work with local government have you seen a local government actually insist that the used cooking oil from a particular council or constellation of councils go to a particular site?

Ms ARCARI — Rather than it going to a particular site, it has been the case that a recent consortium of councils that is just at the project implementation stage actually has in its tender specification a minimum 40 per cent recycled oil content of its fuel. That is in their fuel specification tender, so they are getting that directive in at the ground level, that their fuel is to have a minimum recycled content.

The CHAIR — That is interesting.

Mr CRISP — Can I just clarify one of your figures. Earlier in your presentation you said 100 million litres of cooking oil is available. That is an Australia-wide figure?

Ms ARCARI — Yes, 100ML Australia-wide. For Victoria the figure is 20ML.

The CHAIR — Many thanks. That has been very, very interesting. In about a fortnight you will be provided with a copy of the transcript. You are free to make any typographical corrections that you need to, and our secretariat may be following up any points of clarification they require. It has been very interesting. Congratulations. Thank you very much.

Ms ARCARI — Thank you.

Witness withdrew.