

CORRECTED VERSION

STANDING COMMITTEE ON ENVIRONMENT AND PLANNING

LEGISLATION COMMITTEE

Subcommittee

Inquiry into Environment Protection Amendment (Beverage Container Deposit and Recovery Scheme) Bill 2011

Melbourne, 17 November 2011

Members

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Mr M. Fraval, chief executive officer, Revive Recycling.

The CHAIR — Welcome to the Legislative Council Environment and Planning Legislation Committee public hearing in relation to the inquiry into the Environment Protection Amendment (Beverage Container Deposit and Recovery Scheme) Bill 2011. You will be able to state your name and the address to which the transcript may be sent as well as the name of the organisation you represent. All evidence taken at this hearing is protected by parliamentary privilege. You are protected within the confines of this room, but as soon as you cross into the other room it no longer applies. The evidence is also protected by the Legislative Council standing orders. All evidence is being recorded by Hansard. You will be provided with a proof version of your evidence in about three days, and you will have the opportunity to correct any typographical errors in your evidence but not matters of substance. If you could take 5 to 10 minutes to make a presentation, the rest of the time will be taken up with questions from members.

Mr FRAVAL — I understand I should state my name again. It is Markus Fraval. I am representing the company Revive Recycling. Our address is unit 6, 42–44 Garden Boulevard, Dingley, Victoria.

Mr FRAVAL — Thank you first of all for the opportunity to give some verbal evidence to this committee. I have not got any additional presentation material; I thought maybe we had already overwhelmed you with the original submission, but I do want to add a few points from that.

First of all, maybe I will start with a bit of background. Revive Recycling was established basically to make recycling of key consumables as cost effective and convenient as purchasing them in the first place — that was our vision — with a particular focus on making the South Australian deposit system more efficient. It is a system that works very well in terms of quantity and quality of material recovered, but it is also a system that is entirely manually driven and very out of date in terms of the technology that is available. We saw an opportunity to improve that system. Increasingly we are focused on the Northern Territory as that system is just about to be rolled out there.

I have a long background in recycling. I was involved in providing technology to kerbside recycling and material recovery facilities, or MRFs. Prior to that I worked for a while at the United Nations in industrial ecology, in broad closed-loop systems design, and prior to that I was in fast-moving consumer goods brand management — interestingly enough, mostly in beverage containers. I therefore have a bit of an unusual overview.

Revive Recycling is the exclusive distributor and partner of Tomra Systems, a Norwegian company. Tomra have around 2000 employees. They are a publicly listed company in Oslo, and I would say that they are the leader in recycling technology, particularly in reverse vending machines but also in technologies applied to non-deposit systems as well. They have over 67 000 reverse vending machines in operation around the world, collecting over 30 billion containers over a year. Just to give that some perspective, that is double Australia's entire consumption of containers going through their machines every year.

Maybe I can touch on a few points that were raised in our submission. First of all, I think it is worth asking: why deposits? Typically the answer to that is that there is a massive increase in the volume of recycling that a deposit can achieve by providing an incentive for consumers, because effectively you are doubling the recycling rate of a resource that is otherwise wasted, and it is a very valuable resource. But there is a bit more to it than that because — and I am often frustrated by this — there tends to be a focus typically on waste management, and what waste management typically means is diverting waste away from landfill. We can basically quantify how many tonnes of material is diverted away from landfill and compare that with another system, and deposits will divert twice as much material.

Really we should be focused not just on the amount of tonnage that we divert from landfill but on resource and life cycle impact optimisation, and what I mean by that is basically generating the highest value and the maximum avoided life cycle impacts from that material. As an example, if you are diverting glass from landfill, you can do that in a number of ways. One way is to divert it and put it into road base, and basically that is a one-off so-called recycling — a very low value application. It counts in all the numbers as exactly the same tonnage. Another way of doing it is to divert it to closed-loop recycling to manufacture new bottles out of it; then it is a very high value application, and it is an application that is then potentially repeated numerous times over and over again. And yet those two, in terms of numbers of diversion of waste management, are effectively treated the same.

The same is true of PET. PET bottles can be recycled into everything from mixed-plastic recycled garden furniture et cetera or into strapping for baling of waste bales and other bales, or they can go into closed-loop bottle-to-bottle very high value recycling. There are vastly different environmental and economic impacts from those different types of recycling.

A container deposit system is not only good because it provides a greater quantity of materials and diverts them from landfill; more specifically it is improving the value of the recycling that is collected. It is very pure material — there is virtually no contamination — which means that the end use of those materials is of the highest possible economic value and it avoids the most environmental impacts throughout the production chain. Typically that is why you will find that internationally reprocessors support and benefit from deposit systems. As an example, in Australia the leading PET recycler is based in New South Wales and actually ships all of South Australia's PET from their deposit system to their plant because it is the highest value input and because it dilutes the contamination in the material that is collected from kerbsides on the east coast.

I would like to emphasise this point a little bit more, as the environmental and economic benefits of the quality of recycling are typically missed. They do not just stop at the point of sale to a reprocessor. It is often correctly quoted that there is a higher premium on material bought from deposit systems than non-deposit systems, which is true, but the economic and environmental benefits go beyond that. They then go to the reprocessor itself, which can attract several hundred dollars more per tonne by getting high-value PET that goes back into bottles than from the flake that is exported to China to lower value applications, for instance.

That is effectively my first point, but there is a little aside to that, which is that typically our targets and ambitions for recycling, in terms of quantity and the quality, tend to be too low. I would just like to cite a McKinsey report of a couple of years ago called *Pathways to a Low-Carbon Economy*. In that report they were looking at all of the different methods of achieving a system that avoids climate change of more than 2 degrees, and they started putting a cost to all of the different pathways within the economy to achieve such an objective. What they found was that diverting and recycling waste was actually one of the very lowest cost pathways; in fact it was a net benefit in itself — there was a negative cost in doing that. As part of their assumptions, they were assuming that developed economies would recycle 90 per cent of their solid waste. Of course we are far off that, even in low-hanging fruit and easy things like containers.

I represent a technology company, so I would like to talk a little bit about what technology is available. Our RVM technology is effectively an enabling technology that drives deposit-system efficiency and enables consumer convenience. The ways it drives cost efficiency — maybe I should describe how these machines work, first of all. Is that necessary?

The CHAIR — Is it very different to the one that we have seen on the video?

Ms PENNICUIK — He probably does not know.

Mr FRAVAL — Probably not. Effectively a consumer brings their containers, feeds them into the machine and through a combination of technologies — through bar-code reading, shape and material recognition — the machine sorts the materials, identifies whether it is or is not a deposit container and gives a voucher back, typically a voucher rather than cash.

The CHAIR — Does it crush with the lids on?

Mr FRAVAL — It can crush with the lids on. It can either reject containers with the lids on and ask you to take them off, or it can crush with the lids on. When it crushes with the lids on, the lids actually come off, so it is not a big issue in terms of recycling.

The CHAIR — It just pops off?

Mr FRAVAL — Yes. You end up with sorted, pure material streams. There is a deposit value in the form of a voucher given for each deposit material. That does not prevent you recycling non-deposit; you just will not get your 10 cents back for it. Then, typically how it works in most markets around the world, is that you take that voucher into some sort of partner, a partner retailer, for instance, and you redeem it for cash or against your shopping.

The technology drives efficiencies basically by automating the redemption, the sorting the cash-handling — preventing fraud in that way — and by compacting at the point of collection. You have pure material streams that are then compacted for collection, so you are saving on transport costs. Every bottle that goes through is recorded, and that data is then sent to the system coordinator. The system coordinator has a precise breakdown of what bottles went through which machines, of which type, which brand and what material type. All of that data prevents the need for lengthy manual auditing and weighing of the materials.

As a result of that, most deposit system coordinators in Europe, which in most cases are industry run, actually pay a higher handling fee to redemption points that use automation than to those that manually sort because they are getting the data, because the material is compacted and because they can guarantee purity. On the other hand it drives consumer convenience. Instead of having to go to the manual redemption centre or depot or yard in South Australia, which is often in a sort of industrial area, these can be positioned right outside the front door of a shopping centre or supermarket. You can simply turn up with your bottles, feed them into the machine and take the docket directly into your supermarket as you do the shopping. Convenience and deposit value are the key drivers of the redemption rate — ultimately the recycling rate — so that is an important factor.

Finally, the other thing to mention is that these machines are actually beneficial, or they can be potentially beneficial to retailers. I will not say that all retailers are going to like them, but in many cases they are beneficial to retailers. In fact that is evidenced by the fact that there are retailers who invest in this same kind of technology, even outside of the benefits of a deposit system. The reason they do that is because if they can attract consumers to their store by providing a service for recycling, or some kind of incentive, they can bring consumers to their store instead of their competitors'. They can generate loyalty. An example is Tesco in the UK, where they have rolled out 80 centres with RVMs.

Just a couple more quick points, if I may. I hope I have got a bit of time. There is often discussion about price impacts on consumers. Certainly if you buy a container with an additional 10 cents on and you do not recycle, there will be a price impact on you. The key point here is that you have the choice. If you are price sensitive, you simply return it, you recycle it and there is no cost imposition. The only other cost imposition is effectively if there is a net cost in the system that is borne by the beverage companies that may be passed on to the consumer.

The reality, the actual experience internationally, is that the net costs of a well-designed system, where the unredeemed are funding part of that system, range from around a cent or less, down into the range of about negative half a cent. A well-designed system will always be less than half a cent per container, so any cost price impact must at the very most be of that amount. The reality is, if you look at prices in South Australia versus Victoria, that there is really very little difference. Similar studies have been done in Massachusetts versus neighbouring non-CDL states that also show there was really no price difference between adjacent deposit and non-deposit states. I have a study here, which I can forward on afterwards.

I believe Victoria has an opportunity to design and implement a best practice model that is not only consistent with South Australia and the Northern Territory in terms of the same value of deposit and coverage of materials but more efficient in its design and use of technology. I think that Colleen Hartland's bill actually provides such a model, particularly in the use of a single coordinator, which means that materials do not have to be sorted into different brand ranges for different super-collectors or coordinators. I think that while it does not lead to national consistency, Victoria not introducing a deposit system is also not nationally consistent. If anything, introducing such a deposit system is a pathway to then ultimately introducing it nationally and having a well-designed system of which Victoria can be a central part.

Finally, very briefly, I just want to mention that if such a system was introduced, we estimate that there would be inward investment into Victoria, including through our partners and our company, of around \$100 million, and that there would be between 600 and 800 new jobs in collection, transport and reprocessing. Those are probably conservative numbers. I understand in South Australia they estimate that they have about 1100 jobs through the deposit system. There would be less if you had automation, but on the other hand there would be higher value, higher paid jobs. I think I should probably leave it there. I went on a bit longer than I expected.

The CHAIR — Thank you. You are distributing within Australia and New Zealand a range of systems, including the RVMs, and you have stated that yours is an enabling technology company specialising in diverting, recycling and assisting resource recovery. In terms of that general objective, are there people you are

distributing to who are not connected with a container deposit scheme but are generally using technology to improve the processes of sorting to gain that sort of efficiency and assist recovery? Who do you distribute to?

Mr FRAVAL — We have had interest in, if you like, what we call non-deposit models. The challenge with non-deposit models — the beauty of the deposit system is that you have that incentive to recycle. That incentive is provided by the system, and those who do not recycle fund the infrastructure. When you are trying to achieve a similar effect without a deposit system, a commercial partner or a purchaser of such technology will have to fund and find an incentive of their own.

The CHAIR — You are not answering my question. I understand what you are saying. If we were starting with a clean slate, I think your comments would apply, but we are not starting with a clean slate; there is an established industry with a substantial degree of investment in infrastructure and jobs. My question to you is: if there were no container deposit legislation, as there currently is not, are there applications of your technology which are currently assisting in waste minimisation and resource recovery?

Mr FRAVAL — In Australia, no, we have no such application. There are applications of other RVMs that are collecting in public place recycling. It tends to be rather low volumes; it tends to be more of a marketing-based approach rather than a large volume of away-from-home consumption.

The CHAIR — For example, we heard from the previous witness that in his local town they collect, it is recycled and goes into the bin and to a sorting business that is run by people with intellectual disabilities. Whilst obviously that is a very worthy endeavour, one would assume that that sort of enabling technology could assist at that end point where materials are already — —

Mr FRAVAL — If I was answering specifically from the particular technology that we deal with, you would not apply this technology in an MRF, a materials recovery facility, for instance. You would apply a different kind of technology.

The CHAIR — That is commonly in use?

Mr FRAVAL — Yes. Technology is certainly being used in kerbside recycling, and the technology continues to evolve as technology continues to evolve in deposit systems — absolutely.

The CHAIR — You also suggested that the deposit scheme would have no negative impacts on kerbside collection. Can you advise the modelling this is based on?

Mr FRAVAL — Sure. The model that is based on is one where the residual material that is left in kerbside collections is collected by the kerbside operator or the MRF, and that material is able to be redeemed for the 10 cents. What that means is that a kerbside operator at the moment might get around 30 per cent of total consumption in a particular given area through their facility because national recycling rates for containers are about 43 per cent, and there is obviously commercial and industrial recycling as well. Just kerbside from residential might be around 30 per cent, and on that 30 per cent, they would get around just under 2 cents per container in average material sales value across the materials.

Under a container deposit system, you would expect it would be around 10 per cent residual material still in the kerbside system. That is typically what they find in South Australia and other markets, but each container there will average around 10 cents in value because they are redeeming the 10 cents, so revenue wise they are better off. Cost wise they are certainly better off because there is less material going into the bins, the trucks can go further and they are picking up less glass, which causes contamination problems on paper.

Kerbside, as you are aware, is a net cost. It is borne by local governments to the tune of several hundred million dollars, so if you reduce the volumes that you are collecting, you reduce your collection and sorting costs. By reducing your costs on the one hand and increasing your revenues on the other, kerbside operators, provided the system is designed such that they benefit from the deposit, will be better off. The only potential impact is one of timing of contracts, and that obviously has to be managed on a case-by-case basis.

Mr TARLAMIS — We have heard that in South Australia the use of reverse vending machines has not been widely taken up. Some examples as to why have included ease of use and some technological problems, and it was said that there had been some advancements in that. Do you have any particular views as to why they

have not taken up that technology? Given that the Victorian scheme talks about having 270, do you have any concerns that people will not actually use them or there may be — —

Mr FRAVAL — Maybe I will answer the last one first. I do not have any concerns that people will not use them. If you look at almost any deposit system around the world — South Australia is probably the one, and maybe there is another one internationally — where RVM technology is not being used, you have to ask why. I think in any new system if you make it convenient and the technology can add value, then it will be used. Certainly we are not pushing technology for the sake of it; we are only wanting to make it available where it adds value to the system.

The problem in South Australia is twofold, although there is a principal problem. One is that there has been no investment in technology for 30 years, and the model there is for people to save up over many months and then ultimately take to a depot. That is a cultural model that has evolved. That is not actually the reason that there is not RVM technology there. Initially the local super-collectors were very keen to introduce technology into South Australia because of the cost savings, but ultimately there was, in my opinion, a tug of war between local and national boards and political concerns at a national level in terms of deposits more broadly, and they were not interested in investing in technology. Not only were they not interested in investing in technology; they were not interested in others investing in technology because we had offered to invest in technology and provide lower handling fees and were rejected, so that is the reason there is nothing in South Australia. In the Northern Territory we hope it is going to be a bit different quite soon.

Mr TARLAMIS — Further on reverse vending machines, it is said that the machines will only accept uncompact containers; to what level? For instance, when you have an empty container, if you pressed it with your hands and it was slightly crushed or out of shape, would that still be accepted by the machine, and also what would happen to a bottle that, say, had a straw or something inside? Would that be rejected?

Mr FRAVAL — The answer to that is that you can set up the machines to only accept very perfect shapes, but in most cases most markets will set them up to accept some level of crushing. There is a deliberate reason why they do not want to accept completely flattened containers, and this is because it is an anti-fraud issue. You want to have basically full containers which the machine then compacts, and then once they are compacted they cannot be re-fed into any machine and redeemed twice. There is a benefit in having them whole, but as you say, some people will part-crush them, and it will accept them.

With straws, again it depends on the program. It can reject them and say 'Please take out the straw', and you have to do that; otherwise it might accept it. Typically you would want to reject it, because straws are of a different plastic type.

Ms PENNICUIK — Thank you for your submission, Mr Fraval, I was interested in the very unspoken-about part, which is the reduction of the use of virgin materials. I wonder if you know of any assessments in places where they have extensive container deposit as to the impact, the percentage reduction that might be bringing about, because I agree with you that that is an issue that is not talked about much, and I think it is a sort of externality and a benefit that we do not quantify enough?

Mr FRAVAL — Absolutely, and I guess the higher the value of the application the more whole life cycle environmental impacts and virgin production you reduce. There are not enough of those studies in Australia. There are some studies out of Europe. I understand a more recent one is on its way, in terms of the whole life cycle impacts of different approaches to recycling, for instance, contrasting kerbside with deposits. There is some work. The White report a few years ago in New South Wales looked at the full life cycle impacts of the material and quality from a deposit system and quantified that in monetary terms. I think that was a fairly successful attempt at that, but generally it is quite hard to get those figures. I think it is worth asking reproducers.

There is data. I am aware, for instance — because we used to provide the material to PET sorters — that to get the highest value PET and to be able to go to closed-loop recycling you have to get under 20 parts per million PVC in PET — PVC is another type of plastic. Twenty parts per million is 1 in 50 000 bottles. You are never going to achieve that effectively from kerbside systems. It is impossible to get that, whatever the technology, when you start co-mingling everything and then trying to re-sort it all out. If you are going to get that kind of quality, you really need to basically sort at the point of collection, which is what container deposits do.

By going to bottle-to-bottle recycling they are getting somewhere of the order of — I have not got exact numbers — \$500 to \$600 per tonne of recycled PET more than they would if they went to lower value applications such as fibre for clothing and other aspects. That is an economic value, but of course there is an environmental life cycle benefit that goes along with that, because once you return it to its original use you can do that a number of times.

The CHAIR — In its written submission to the committee Boomerang Alliance suggested that multiple collectors would drive efficiency and lead to increased recycling rates at low administrative costs, but you appear to suggest that a single-operator model is better. Can you elaborate on that and on some of the benefits of the single-operator model rather than the multiple?

Mr FRAVAL — I think the key thing is that — and in this respect they are the same — there is no requirement to sort into different brands for the same material: sort aluminium into a number of different brands, sort glass into a number of different brands. That is obviously inherently inefficient. Boomerang's system is effectively one where there is a single system coordinator, but they have a number of coordination points which are the hubs. It is a very efficient system. The system I am proposing is no different from that, and there is a single coordinator. You could do it the way Boomerang is suggesting, or you could have a single coordinator that has its own coordination points rather than having third-party hubs that basically do the job for it. Those are kind of small differences; the key thing is that you are sorting only by material type and not by brands.

The CHAIR — There being no further questions, I thank you very much for your time and your submission and remind you that you will receive your transcript in about three days. You have the opportunity of correcting any typographical errors, and we would appreciate its prompt return to the committee executive. Ultimately it will be uploaded to our website and included in our report. Thank you, Mr Fraval.

Mr FRAVAL — Thank you very much again for the opportunity.

Witness withdrew.

