

# TRANSCRIPT

## LEGISLATIVE COUNCIL ENVIRONMENT AND PLANNING COMMITTEE

### Inquiry into Recycling and Waste Management

Melbourne—Wednesday, 2 October 2019

#### MEMBERS

Mr Cesar Melhem—Chair

Mr Clifford Hayes—Deputy Chair

Mr Bruce Atkinson

Ms Melina Bath

Mr Jeff Bourman

Mr David Limbrick

Mr Andy Meddick

Dr Samantha Ratnam

Ms Nina Taylor

Ms Sonja Terpstra

#### PARTICIPATING MEMBERS

Ms Georgie Crozier

Mr David Davis

Mr Tim Quilty

Dr Catherine Cumming



## WITNESSES

Mr Gary Combes, Regional Procurement Director, Asia-Pacific, and

Mr Craig Mynott, Regional Cullet Director, Owens-Illinois Inc.

**The CHAIR:** Good morning, everyone. I declare open the Environment and Planning Standing Committee public hearing. All mobile phones should be now turned to silent. I would like to extend a welcome to members of the public—I think there are one or two. The Committee is hearing evidence today in relation to the Inquiry into Recycling and Waste Management, and the evidence is being recorded. I would like to welcome Mr Gary Combes and Mr Craig Mynott from O-I glass. Thank you for making yourselves available today. All evidence taken at this hearing is protected by parliamentary privilege as provided by the *Constitution Act 1975* and further subject to the provisions of the Legislative Council standing orders. Therefore the information you give today is protected by law. However, any comment repeated outside this hearing may not be protected. Any deliberately false evidence or misleading of the Committee may be considered a contempt of Parliament. You will be provided with a proof version of the transcript in the next few days.

So what we have allowed today—I believe you do have a presentation that is sort of 5 minutes. We can stretch it to 10, as you see the size of the Committee that will be asking questions. We have got a bit of time restriction. I think we have put aside one hour, so hopefully we can go through that. Who would like to go first?

**Mr COMBES:** I will start. Good morning, and thank you for being able to participate in the Inquiry. My name is Gary Combes. I am the regional procurement lead for O-I, so I am responsible for the APAC region—all the key inputs into our manufacturing process. One of those major inputs is the recycled glass that we buy to go back into new glass bottles. Craig Mynott is the regional lead for the glass recycling arm of our business.

### Visual presentation.

**Mr COMBES:** I thought I would start with just a little bit of background on O-I. O-I is the world's largest glass container manufacturer. We are a US-listed company based in Perrysburg, Ohio. We make pretty much bottles and food and beverage containers for all the leading brands around the world. Within Australia we have four glass manufacturing facilities—Melbourne, Brisbane, Sydney and Adelaide—and we also run one of the largest glass-processing facilities for recycled glass up in Brisbane. Across the Australian jurisdiction we make about 2.7 billion bottles per year across those manufacturing facilities, and we employ about 1100 people across the country. Of interest is that within the Victorian context we first started operations here in 1872, the Melbourne Glass Bottle Works, and the legacy of that plant still exists today at our existing facility at Spotswood, just under the West Gate Bridge.

This slide here gives you a perspective of our global presence. We operate in 23 countries—77 plants—around the world. I guess the key message here is that we operate in many jurisdictions with very different and vast recycling systems and different producer responsibility systems in place, and we can provide context around the pros and cons of those tapping into our global network.

We do have sustainability goals that we have across the global perspective. The one key one there I want to focus on is the glass recycling requirement. At the moment within the Australian marketplace 39 per cent of our content in the glass bottles is recycled from post-consumer glass, but we have goals to increase that to 50 per cent. We have put a plan into the Inquiry that we believe will take us well above 50 per cent within the Victorian context. I was sort of remiss early on—what you can see there are a few bottles of our key brands that we support out of our Melbourne facility in Spotswood.

I will quickly touch on the benefits of recycling. Glass is truly the most sustainable packaging option available because it is infinitely recyclable—it can be turned back into a bottle within 30 days of being consumed, going through the recycling system. It is the only true closed-loop packaging system in Australia at the moment that is working well. Some of the benefits that we get from recycling glass: it reduces virgin material, so for every 1 tonne of glass it displaces the need to take 1.2 tonnes of virgin materials, and mineral resource is a pretty

significant issue for Australia and the globe in general; and also, for every 10 per cent of cullet that we do use—cullet being recycled glass—we save 3 per cent energy and 5 per cent emissions in the process.

We have obviously got a large presence within the Australian context, and commingling has been our reality. Commingled recycling has been our reality for the last 25 years. It has reached a ceiling in terms of its suitability for this market. Certainly we do not believe it is no longer viable—certainly in terms of the quality of outcome that it can deliver; the economic sustainability of it. At the end of the day the availability of end-market solutions just is not there. We have done the best that we can to get to 39, but we cannot go higher unless we change the system.

Whatever system we do put in place, the key is the separation of those materials at the source. So we can debate at length the type of system we want to put in place, but that is the truth: the separation at the source is the only solution, and then the debate should be around what is the solution around that separation at the source. Within the Inquiry we have put through a proposal that looks at the glass elements, and our recommendation is around putting a glass-only kerbside bin in the system—so every household in Victoria having a glass-only collection bin. You separate the glass and you put it into a single stream, which is a really important criteria for high efficiency, high quality. It is convenient and it provides large volume and ultimately optimal efficiency.

We work right through the different jurisdictions in Australia, and when you talk about this area the discussion is always about landfill avoidance. That is the criteria for success. We are challenging everyone to think much more holistically and broadly about the potential here. It is about closed-loop circular economies in the future, so how do we go about developing that? It is not about landfill avoidance—that has only allowed us to not create the innovation that we need to take this to a new level. So for us that is the important element, and this solution will provide a closed-loop economy for the Victorian system.

What we are proposing is that if we were to build the infrastructure to process the cullet here in Victoria—a processing plant that can do 150 to 200 000 tonnes—that would create an efficiency or a glass yield of 83 per cent because of the quality of the material versus the current commingling system where you only recover about 40 per cent of the glass that can go back into bottles. That utilisation increase can be fully consumed within our glass manufacturing plants in both Melbourne and Adelaide. There is a balancing network that needs to happen because of the amount of wine bottles that come into the Victorian market. It will be complemented with transfer hubs—so major metropolitan areas and regional zones where we can consolidate glass and drive economy of scale, bring it into this large-scale facility. It will be complemented also with a statewide education program. I think the key for us is that at the moment every jurisdiction is doing something different. The bin looks different, the rules are different. Everyone is just confused. So by having a statewide system—same bin, same rules—we can really focus on the education piece and drive really strong, quality outcomes.

I think the final point to note is that we operate in many different areas, and we obviously work closely with New South Wales and Queensland on the container deposit system as well. But we believe this is a better system than putting in container deposit legislation. The reason is because in New South Wales and Queensland it is one of the only areas globally where you have put a CDL system over an existing kerbside system that is so entrenched and culturally accepted. I mean, it has got one of the most extensive kerbside systems in the world, and we put CDL over the top. It has created two streams—two streams that drive inefficiencies. You have got a whole heap of glass still coming through the kerbside system, but they have not addressed the commingling issue: quality, not getting good outcomes, no solutions. They still have to address the commingling issue. This provides an opportunity to actually get a more enhanced outcome by actually focusing on the real issue, which is recycling as opposed to litter prevention. By doing that we are going to drive a much better outcome than the other states still have to address it and it is still a problem.

Within our Brisbane operation we take all the CDL glass at the moment, and it is less than 40 per cent of the total glass that we get through the system still. So 60 per cent is still going through kerbside. It is our view that the cultural acceptance of the convenience of kerbside will always be a barrier to getting glass through CDL systems up to the 80 or 90 per cent level that is flagged within the argument.

We have put in a submission with those specifics, and we are happy to talk about that today in more detail. That is the end of our opening statement. Thank you.

**The CHAIR:** Excellent; thank you very much. I will kick off with the point you just made about the kerbside collections having a separate bin. I know some councils—for example, Ballarat—are looking at encouraging their ratepayers not to put glass at all in any of the bins and to drop it off at a collection point instead, and then there are the CDLs. Can you tell me your view of what is best and most effective? I think you did say that kerbside is probably the most efficient way, in separate bins. But these three competing models, do they work? Or what do you reckon would be the perfect solution to achieve, let us say, a target where on my understanding you could get 100 per cent of the recycled glass in Victoria consumed by your Adelaide and Melbourne plants? Is that what I heard you saying?

**Mr COMBES:** Yes.

**The CHAIR:** You receive the material?

**Mr COMBES:** Yes, so for us it is a separate glass bin at the kerbside. What the City of Ballarat has done is they have sort of done that in desperation. They do not really want to be putting glass to landfill. I mean, that is not a progressive solution, but they feel that they have got no choice because they were relying on SKM. The fact is today the processing capability is not there. We need that missing link. We have got processing capability, but each of the MRF operators—Visy, Polytrade, SKM—have they their own facilities, have their own capacity and we have not optimised that to allow the extra volume that Ballarat could have diverted because the SKM facility is not running today. So it is a short-term problem that they have had to address, but from speaking to Ballarat, they do not want to have that solution long term either.

We want to create glass back into bottles—it is the best outcome, it is the most sustainable outcome—and you do not do that by having the system that Ballarat has put in place. You look at the models that we are working on with councils like the City of Yarra where they are trialling glass-only collection bins at the moment, and we have a lot of other councils looking at expanding that program as well. But for us the missing link is having more control over the processing capability, having the scale we need to be able to manage all of that.

**The CHAIR:** Could you have a CDL or CDS, let us say, in the city, in the metro area and specific areas to supplement the kerbside? I agree with you, I think the kerbside is the only solution, but can you have a limited container deposit scheme around shopping centres or maybe in the city to offset littering and stuff? Is that something—

**Mr COMBES:** Yes, it could be a good hybrid. We are not against CDLs, and in many jurisdictions we actually support it under the right model, but having a large-scale one without addressing the fact that glass will still go into kerbside is our major concern—so having the right hybrid where you are dealing with litter in public places, but for us having that without addressing the commingle bin situation would not be a good outcome.

**The CHAIR:** I will move on to other members, but one thing we need to come back to later on which you have not covered, which I think is in your submission, is about the stewardship program, and we will come back to that at a point in time during the discussions.

**Mr HAYES:** Thank you, Mr Combes. I was wondering about the amount of energy it takes to remelt the glass. Are there significant greenhouse gas emissions and other undesirable features of the process? Can you talk to the amount of energy that it uses?

**Mr COMBES:** I do not have the exact numbers with me today. I can take on notice the exact energy requirements. But the melting of glass is an energy-intensive process. That is why recycled glass is beneficial, to try and reduce that footprint. But it is different to other packaging mediums, so is aluminium and plastic but it is much further or deeper in the supply chain from the cracking and the smelting process of aluminium. So overall we are comparable to other packaging mediums. It is just that it is quite intense at the local space, because mostly the glass is produced at a local level.

**Mr HAYES:** Yes. What I mean is when you melt glass down to re-use it.

**Mr MYNOTT:** You use less energy than melting the virgin materials.

**Mr HAYES:** The virgin materials, yes. Is there any capacity for re-using bottles in their existing form? I remember they used to do that with beer bottles years ago and wash the milk bottles and re-use them. Is that something that you would do or something that you are looking at?

**Mr COMBES:** We are not actively looking at that within the Australian context, because I think the economics of that was maybe 30 or 40 years ago. But we still have those systems operating globally, so within South-East Asia that is a common system still. Within South America it is a common system. We do it for certain customers at the moment, like the returnable milk bottles et cetera. So we are starting to emerge in that area, but largely the mainstream is single use.

**Mr HAYES:** Is it more energy efficient?

**Mr COMBES:** Overall, a returnable system is the most energy-efficient use.

**Mr HAYES:** I mean rewashing them instead of melting them.

**Mr COMBES:** Yes. It is a more energy-efficient process.

**Mr HAYES:** Are labels a significant contaminant to your operation—labelling on bottles?

**Mr MYNOTT:** Labels can have an impact when you are going through the glass recycling process because when the glass is broken if a label is still attached to the piece of glass, then it can be rejected as a contaminant. But in terms of it being used in the melting process, it does not cause significant issues.

**Mr HAYES:** They would just burn up, I suppose.

**Mr MYNOTT:** Yes.

**Mr COMBES:** Most of the current glass processing facilities have processes to remove labels and to be able to optimise glass recovery.

**Mr HAYES:** Would it be better if labels were more evenly removed? Like if they were water-soluble? Does that make any difference to you?

**Mr COMBES:** It does help. There are a couple of brands on the market where the labels are notorious for being a little bit more difficult to remove, but most of the labels are easily removed in their current format.

**Mr HAYES:** Some of them are really hard to remove. I have done a bit of re-using of glass jars—

**Mr LIMBRICK:** Put them in the dishwasher.

**Mr HAYES:** They don't even come off then. Anyway, that is enough from me.

**Ms TAYLOR:** A couple of questions. Some buildings, particularly some of the modern constructed buildings, cannot take, for instance, FOGO—they cannot take that bin and so forth. So you would have your landfill bin, some sort of other recycling bin and a glass bin. Would there need to be a retrofitting process for some of the more modern apartment buildings which do not take anything other than the very standard run of bins. Do you know? I am thinking that you have had that experience in New Zealand. I am not sure how the housing make-up is there and whether that impacts the delivery cycles. I used to be a councillor, and I know there were certain buildings that could take it. We are talking here about glass. I am not diverting to talk about FOGO, but I am just saying that that is another bin and there are certain buildings that can take another bin and another truck and some that cannot. Are you aware of those kinds of barriers with introducing a glass stream?

**Mr COMBES:** Yes. I mean, that level of detail for us—we have not gone into that level of detail because every jurisdiction would probably have different challenges. But we would be proposing in those high-density residential areas to have common bins, so it is not like every household. You could have common bins and getting economy of scale and efficiency that way and potentially work on solutions with each individual case to create space for that bin.

**Ms TAYLOR:** Okay. All right. I have two more questions; I will keep it tight. With the glass-only kerbside recycling in New Zealand—I am assuming that has rolled out well. Are there things we can learn from that? Were their negatives as well that we can learn from if we are going to look at other solutions? What do you have to share about that?

**Mr COMBES:** It has been highly successful in those areas that have adopted it. It is not universal. Auckland still remains commingling and Christchurch remains commingling. It is a problem for them. New Zealand was looking at our experiences and a lot of their areas learned from the mistakes that we made with commingling early, so places like Wellington, Dunedin and others looked at the alternatives. So they have successful glass-only collection systems there. I can take on notice the exact issues that each particular area had in terms of developing that solution.

**Ms TAYLOR:** Yes. That would be good.

**Mr COMBES:** I am sure everyone had unique opportunities they had to work through, but for us the biggest barrier was actually getting the supply chain working. In Dunedin, right at the south of New Zealand, we needed to move that glass right through to Auckland where our glass manufacturing plant is. Working on the supply chain solutions was key, so we worked with providers there. We had drop-off areas like we are proposing here. We designed custom bins that allowed the glass to go in within separate colours and it gets transported through to our facility in Auckland successfully. So those barriers we worked through and created an economic solution to make it work.

**Ms TAYLOR:** Right.

**Mr MYNOTT:** Just to expand on how successful it is, when we talk about Australia, we talk about a recycle content of around 39 per cent. In New Zealand we have a recycle content of between 55 and 60 per cent, so we are getting that good-quality glass through that we can process and use back in that manufacturing process.

**Ms TAYLOR:** That is good. It is inspiring.

**Mr COMBES:** Eighty per cent of the glass in New Zealand is source separated in one form or another.

**Ms TAYLOR:** Eighty per cent, did you say?

**Mr COMBES:** Eighty per cent.

**Ms TAYLOR:** Okay. That is good. If we can take on notice just a little more detail about what might have been some of the things that might not have gone so well that we can learn from so we can then do it even better if that is the pathway we take here.

**Mr MYNOTT:** Certainly Yarra City Council, who have commenced their own kerbside collection trial, have visited New Zealand to understand what happens over there. They have also got the bins in the multi-unit facilities as well, so they are trialling some bins there too.

**Ms TAYLOR:** Good. The only other question I had on a practical level, because I am going to hand over to others and give them a chance, is see the Vegemite jar there and it has the plastic top. What limit does that impose for you? How do you cope with that situation where you have got plastic intersecting, and you have got paper as well?

**Mr COMBES:** That is okay. Through the beneficiation process, or cullet, we do crush the materials; the plastic comes off, it gets separated, the metals get separated. The major contaminants for us are people not recycling the correct thing, like crockery, Pyrex dishes and the elements that actually cause us a problem in the furnace—metal. We have solutions to deal with the general packaging elements. The design is something we consider with our customers when we put products into the marketplace. Having said that, there are opportunities to improve as well.

**Ms TAYLOR:** Okay. Thank you.

**Mr MYNOTT:** It tends to come more under the education piece. But one of the things we have not been very good at is we tell people what they cannot put in the bin, and there is a list a mile long of things that you cannot put in the bin. In this particular process you want to only be putting in glass bottles and glass jars, and that is it. That is the only thing you need to put in there, and that makes it a lot easier when you tell people what you can put in because then if they get a fluorescent tube, it cannot go in.

**Ms TAYLOR:** Oh, no. That is right. In that case, if they have got the Vegemite jar and they can only put glass in, what are you going to tell them to do then in that circumstance?

**Mr MYNOTT:** Just put it in.

**Mr COMBES:** Just put the jar in. It is a glass jar; put the glass jar in.

**Ms TAYLOR:** And the plastic top?

**Mr MYNOTT:** The preference would be to take it off.

**Ms TAYLOR:** Okay. I am being very precise because it will come down to that, won't it, to reduce the contaminant levels?

**Mr HAYES:** It comes down to educating the public.

**Mr MYNOTT:** Very much so.

**Mr COMBES:** We would see maybe a collaborative process to really refine those rules and really look at the real variables that are going to make a difference to make sure that is clear.

**Mr LIMBRICK:** Thank you for your evidence today; it is very informative. I wanted to touch on a couple of things. With the CDS, we have heard that one of the benefits is it can separate the materials streams. But we have also heard lots of evidence which is consistent with what you are saying about glass being a big contaminant in the commingled recycling. Do you think that if we manage to separate all of the glass at the kerbside into a separate bin, then as far as glass recycling is concerned anyway a CDS is not really going to add a lot of value to that recycling stream? Is that what you are saying, because I think one of the things you mentioned was that it can reduce the economy of scale or something?

**Mr COMBES:** Yes, exactly. I think it will provide a solution, whereas Queensland and New South Wales still have to address the commingling issue, so they are going to have parallel systems and a much more expensive solution as opposed to putting something like this in up-front to address that. Having then a bin with plastic and cardboard mixed is fine; the MRF facility can easily separate that. It is still a high-quality product.

**Mr LIMBRICK:** I want to go back to energy again. It sounds like there is a small energy efficiency by using recycled materials as per virgin materials. What type of energy are we talking about here, and what are the costs of that energy? What proportion of the cost base is that roughly? Is that a small proportion, or is your economic viability totally dependent on that, like it is a really big cost? I do not really have a good sense of that.

**Mr COMBES:** As we have said, we save 3 per cent energy with 10 per cent cullet. So that is material. A 3 per cent energy saving is material. Most of our energy is natural gas and electricity in a 50-50 allotment. You know, across our Australian operation we probably spend maybe \$50 million to \$60 million on energy. So it is a significant cost to our business. We factor in those benefits when we set prices, and we do commercial arrangements to take that material back in play.

**Mr LIMBRICK:** And so of course in that situation if you have got lower gas and electricity prices, then the operation becomes more economic or more things become economical and make more profits.

**Mr COMBES:** Yes, absolutely. But within the Australian context today it is actually just trying to offset a significant cost increase. We have had a doubling or tripling of our energy costs over the last three or four years.

**Mr LIMBRICK:** Yes.



**Mr COMBES:** These are important to help maintain the viability of domestic manufacturing.

**Mr LIMBRICK:** Is there a point at which that becomes not viable? I mean, there must be a point, but are we close to that or is it a long way off? I mean, how far do prices have to rise before—

**Mr COMBES:** I think it is a lot more challenging within this marketplace, but I think there is still a very strong and long-term place for local glass manufacture within Australia. We see that vision. Nothing has suggested that is changing, but the energy costs are becoming more challenging for us. But initiatives like this will help support local manufacturing because, for us, having a local glass manufacturer to take material is key. Imagine if all the glass was imported and we are trying to put all our glass into road base or down-cycle opportunities. We have an important role to play. We take 250 000 tonnes today. We could be taking more than that if we get the system right, and that is a significant solution for this marketplace. So the viability of our business is key. This helps support that.

**Mr LIMBRICK:** And so the road base—we have heard from other recyclers that do turn the cullet into road base and things like that—do you see that as a lower order value use of that material?

**Mr COMBES:** Yes, absolutely. It is a terminal use—I mean, you use it once. I think the perfect solution is you work in harmony. If you have a plant like this where you have got 80 per cent recovery, 20 per cent is not recovered because of the smaller fraction and you work in harmony with companies like Alex Fraser to take the material that truly cannot be used. What you do not want to do is cannibalise really quality material that can go back into a renewable, closed-loop system.

**The CHAIR:** So you can do both.

**Mr COMBES:** Yes, of course. It has got to complement both.

**The CHAIR:** For the rest of the members, we have still got 25 minutes.

**Dr CUMMING:** Do not worry, I will take that up Cesar—no problem.

**The CHAIR:** No, you can only take your 5 minutes. Do not get too greedy!

**Dr CUMMING:** There are a few things that I would like to raise. One of the things that I hear with glass is we do not hear it choking our marine life and polluting our environment, so it is obviously one of the systems that I feel that we should actually support more. When you were talking about investing in Melbourne, what are you wanting Parliament to do in those realms and how could we get more jobs within your system? As well as with education, is there an opportunity to increase education in the commercial and industrial area, seeing that we seem to have so many more bars and cafes and things in Melbourne? How good are you at actually getting your commercial or industrial glass to your plant rather than just the kerbside recycling element? With product stewardship, I am seeing more and more products on supermarket shelves going to plastic. It is hard to get vinegar in a glass bottle these days. There are a lot of things that I used to be able to purchase in glass that are now coming to me only in plastic. Is there a way of actually encouraging that product stewardship and encouraging more of the big companies to use glass? And can we help?

**Mr COMBES:** I will answer the first part and maybe I will hand over to you, Craig, for the commercial piece. In terms of funding, we are proposing to build a dedicated plant that will cost about \$10 million to \$15 million, and it will be a state significant investment and an asset that we can use—

**Dr CUMMING:** Did you say \$10 million to \$15 million? That is nothing much.

**Mr COMBES:** Ten to fifteen million dollars is the cost of building that facility. We already have three plants within Victoria: SKM—or GRS—which is not running at the moment, Polytrade and Visy-run plants. So whether we work with that system and enhance it and grow the capacity or we build another dedicated facility, that is open for discussion. We advocate you build a new facility that is more right-sized for this stream and this quality of stream and get the economies right for the long term. Most of those plants in Australia have had some sort of funding support to be built to be economically viable, typically through the Australian Packaging Covenant in a 50-50-type arrangement. I suggest probably a similar scheme is needed to get that investment up

and running. But we are sort of proposing to work with partners or interested bodies that would be wanting to build and invest in that plant and do arrangements with us for us to take the offtake over a long-term horizon to give it certainty. We believe those bodies are out there. But there will be some sort of funding probably required to get that level of investment up.

**Dr CUMMING:** Sorry, with the packaging covenant, is that federal money?

**Mr COMBES:** The APC is a co-regulatory body, so the funding comes from industry and brand owners typically. That went into a pool where money was allocated to projects.

**Dr CUMMING:** Would you see an opportunity for federal money as well as state as well as industry?

**Mr COMBES:** I think we should be open to all options.

**Dr CUMMING:** Seeing that the current Prime Minister is talking up recycling and getting litter out of our system.

**Mr COMBES:** I think we have got a burning platform here. We need to take a step change and I think we have got to be open to all options to actually put a solution in place that is going to be sustainable and long term. I think everyone has got their role to play, including industry.

**Dr CUMMING:** Yes, local industry.

**Mr MYNOTT:** And just to add to the investment part of it, there is the actual facility and the process and then there would be the collection hubs around the state of Victoria, so you are talking potentially around 14 hubs where we collect the glass and then consolidate it and bring it into a location. So in terms of you asking about the number of employees that we could see, you would have most of the employees in that space, but you would be looking at around 80 people, new jobs.

**Dr CUMMING:** And as I was saying about the commercial or industry and especially the bars and cafes and restaurants that we have so many of in Melbourne, is there an opportunity to make it easier for those small businesses to actually get their glass to you, seeing that it is normally an add-on cost to those businesses and you would be getting good quality materials?

**Mr MYNOTT:** Good quality material, but it would still need to go through a glass processing plant such as this. We currently do get some material from those places. There are small crushing machines in pubs and clubs where they break it down and it gets collected and comes through our facilities. But, again, it would still have to be processed, so it would not be able to go directly into the glass-making process; it would have to go through a beneficiation plant.

**Dr CUMMING:** Yes, I am meaning just the collection, as in being able to have those opportunities to collect good material from those bars and clubs.

**Mr COMBES:** It would be a similar system, so it would go through the same plant that we are proposing here, it is just you are collecting it on a larger scale, so it still may have to be a commercial collection. But we regularly do that today. We have a merchant stream, we call it, where we get colour-sorted glass in today. Most of our material is through commingled collections today, but we still maintain that legacy. The majority of that is through commercial streams. It is just growing that capability.

**Dr CUMMING:** I just do not see a direct collection of glass, so I am wondering if there is a possibility of a direct collection of glass—because a lot of the glass that I see collected commercially is commingled—for you to be able to get a good quality straight stream from these areas. Because it would seem that there are opportunities to have a straight stream in paper with commercial—you can collect the cardboard and paper separately. But having a collection base that is purely just glass via commercial directly to you rather than commingled recycling, I see a real gap in the current marketplace that used to be there. It used to be that you could actually get Footscray recyclers that would just give you bins for the collection of glass.

**Mr COMBES:** I think it will naturally evolve if a system like this was implemented across the state, because naturally then the MRF-ing operations will not design their plants to be taking in glass. Today it has gone to commingling because of convenience, lowest cost and the fact that MRFs are there, willing to take it, but if we take away glass from those facilities and they are designed for paper and plastic only, those commingling options will not be available. The commercial solutions will come in play where you do have glass-only collection, and we can put it through the same stream.

**Dr CUMMING:** Yes, and the encouragement of more glass in the way of opportunities for the consumer to purchase products in glass and the encouragement of that—is there a marketing opportunity, or is there a way that you can work with industry to get that back in place, seeing that there is more and more plastic packaging?

**Mr COMBES:** It is core to our business, isn't it, to try and grow glass volumes, and given that is a more sustainable alternative—

**Dr CUMMING:** And get more consumers behind you.

**Mr COMBES:** I think there are always opportunities to do that more. I think particularly when you are looking at packaging that is not recyclable, like plastic pouches and the like, there have got to be some sort of controls in place about those sorts of packaging entering the marketplace, so having a packaging solution with a recycling outcome is going to be key in the future. And, you know, this sort of system helps promote that. Consumers are seeing their glass go back into bottles; that is what they expect. People are horrified that glass goes into road base and other options. So actually creating a system, promoting it—you could be having it on the bins, education about the closed-loop system that we have created in Victoria—creates that momentum that will then help to drive those opportunities that you are talking about.

**Dr CUMMING:** It is hard to even buy baby food within glass.

**The CHAIR:** Thank you, Dr Cumming. Just on that, so you would be looking at perhaps mandating to have separate collections of kerbside and commercial, so it would require the state to basically have a statewide approach? That is what you are suggesting is the most efficient way of dealing with the issue: to basically have a clear separation where it is commercial or kerbside, and that will require a statewide approach. That would be the preferred, most efficient option you would be advocating?

**Mr MYNOTT:** I agree; yes.

**Mr COMBES:** Yes, for domestic; for commercial I think it will naturally evolve into that system—I am not sure whether we are advocating to mandate a commercial system, but I think that will naturally evolve.

**The CHAIR:** Why wouldn't you do that, because if the volume at a commercial venue, for example, a pub or a hotel, adding another skip simply just glass—you are not saying, 'A voluntary system for commercial and a compulsory for household', are you?

**Mr COMBES:** Well, I think we have got to think this through. Having the consistency is important, so there could be merits in having it across commercial as well. But at the same time the commercial stream are not going to put it to landfill—it is too expensive—so they are going to create a recycling solution, and it is going to have to morph into a glass-only collection if the recycling facilities only accommodate glass-only collections. So it will naturally occur, but the importance is to at least have that consistency across commercial and domestic.

**The CHAIR:** Just one last question from me: I think we have seen in your submission about the stewardship program in New Zealand, and I know your company is one of the participants. Can you take us through how the system is designed and is working in New Zealand and whether or not we should adopt a similar system in Australia or Victoria?

**Mr COMBES:** It is what we believe is one of the better systems globally, because it is led by industry, so it is a product stewardship system led by industry, where brand owners and packaging owners put funds in to support investment and innovation in driving good outcomes. That body meets regularly, it looks at the agenda for glass in particular, about how we can drive improvements, where we need to invest to be able to improve

the outcomes and get more volumes in play. They have really been responsible for driving the fantastic solutions we have seen in New Zealand and the recycled content that we do see there. It is different to, say, Europe, where it is really a government-mandated product stewardship scheme, which is typically effective but much more expensive and has other pros and cons associated with it, but the New Zealand example is probably the lowest cost solution that we have been able to see, and it actually has a really strong outcome.

**Mr HAYES:** I was going to ask you about a product stewardship system and which one around the world struck you as a good one, but you are pretty well saying the New Zealand system meets that objective, does it?

**Mr COMBES:** Yes, it is the best example we have in our network.

**Mr HAYES:** The only other thing is I was just wondering if you could provide, possibly on notice, information about energy consumed in reprocessing glass both by melting it and reusing it and by washing processes—just comparing the energy and emissions factors involved in both of those processes for me, please.

**Mr COMBES:** Sure, happy to.

**Mr HAYES:** Thanks very much.

**Ms TERPSTRA:** Sorry, just quickly, if I can just ask one question piggybacking off the back of that—how much water would you actually use in that process? You may not know now, so you might have to take it on notice, but how much water—

**Mr COMBES:** In the glass recycling process?

**Ms TERPSTRA:** No. As opposed to if you are washing bottles, for example, or recycling. The focus of the question was energy but I am looking at water as well.

**Mr COMBES:** Within the current recycling process we do not use water to clean the material. If it is more about what we use in our manufacturing process, we can take it on notice.

**Ms TERPSTRA:** But if you were to wash bottles—that is the question. What do you anticipate would—

**The CHAIR:** Reusable bottles, we are talking about.

**Dr CUMMING:** A returnable system.

**Mr MYNOTT:** Returnable.

**Mr HAYES:** So I am talking about the energy used in that as well and looking at the water too.

**Dr CUMMING:** Water comparative to furnace. I have just got one question, Cesar, around the container deposit system, and part of your submission just talked about the costly infrastructure. I am just wanting you to, if you could, expand on that a little bit more. Seeing that container deposit systems impose a levy or even a deposit-and-return system, would you envisage that that system would be for glass as well as plastic? Other systems just have a 10-cent return, say, system on plastic. Do they have it on glass as well or do you see that as a barrier? If there was one for glass and one for plastic—seeing that it would seem, from what I am reading in your submission, that with container deposit systems you seem to get more contaminants; glass is contaminated on a higher level. It is great for litter prevention maybe on the plastic side of things, but not so much on litter prevention in the way of glass.

**Mr COMBES:** That last statement—I think I would just to clarify that because I do not necessarily agree with that. The container deposit systems today, in New South Wales, Queensland, provide very high quality glass that we consume and use back into new bottles quite successfully. So that system works well. It has a cost attached to it. The problem that we have is that it does not address all the glass that still goes through the commingling system, and in those states it is still 60 per cent-plus of the material. So what you are losing there—

For us to process glass we need a lot of technology. We are talking about a stream that comes out of the commingling system that has about 300 000 parts per million of contaminants, and we have to process it down to 15 parts per million. So a huge amount of technology and you need high volumes and economy of scale to invest in that. So in Queensland and New South Wales you have still got the commingling issue, the 60 per cent, but you are losing the economy of scale to be able to resolve that through the technology and to invest in that. So you have got a really good quality stream, but you have got half of it that is now going through a poor stream without a solution. So that is the danger.

**Dr CUMMING:** Which is the commingling stream.

**Mr COMBES:** Yes.

**Dr CUMMING:** So virtually you are saying if there was a container deposit system created, there would have to be a separation of plastic and glass to make it a good system because otherwise you would be going back to a system of commingling, which creates the problems.

**Mr COMBES:** In any system we have to advocate for separation, which is the main point that we put up there. Whatever we do choose, that is the reality moving forward.

**Dr CUMMING:** And the question of the levy being on both: would you see a levy on both plastic and glass in the way of a return system?

**Mr COMBES:** I think you have got to be sort of careful; it can provide perverse outcomes. If you start putting a deposit on some packaging mediums and not on others, it sort of leads brand owners to certain solutions that may not provide the best sustainable outcome as well. So we sort of advocate for consistency across the packaging mediums.

**Dr CUMMING:** Do you believe those levies or those deposits for 10 cents is a good system? Have you done any work on if consumers feel that that is a driver?

**Mr COMBES:** We feel that it is a very popular system and consumers like the system, but as an industry player we also understand the economics of that system and recognise it as a high-cost solution.

**Ms TAYLOR:** Sorry, I just want to peg back a little bit, and forgive me if I missed a point: with the product stewardship that has been very successful that you spoke to, what is driving those industry players to be part of it? Are there some sort of incentives from Government? Why do they want to be part of it?

**Mr COMBES:** Yes, it is a Government—I mean, I might need to take it on notice to provide the detail that you are after around the whole scheme, but it does have Government overlays to that product stewardship, so it is not like it is a voluntary element, and both Government and industry have been working together on setting that up.

**Ms TAYLOR:** That is great. A little bit more detail would be wonderful on that, because that could be really helpful.

**Mr COMBES:** Yes. We can provide more detail on exactly the dynamics of that scheme.

**Ms TAYLOR:** That would be great. Thank you.

**The CHAIR:** Excellent. Any further questions from anyone? No further questions? That is good. We are ahead of schedule. So with that, gentlemen, thank you very much for your time today and your submission and contribution to this debate. A copy of the transcript will be sent to you, so if there are any corrections that need to be made, please make those corrections and send it back. Again, thank you very much.

**Mr COMBES:** Thank you. I appreciate the opportunity.

**Witnesses withdrew.**