

TRANSCRIPT

LEGISLATIVE COUNCIL ENVIRONMENT AND PLANNING COMMITTEE

Inquiry into recycling and waste management

Melbourne—Friday, 10 May 2019

MEMBERS

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Mr Clifford Hayes—Deputy Chair

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PARTICIPATING MEMBERS

Ms Georgie Crozier

Mr David Davis

WITNESSES

Mr Stan Krpan, CEO, Sustainability Victoria; and

Mr Matt Genever, Director Resource Recovery, Sustainability Victoria.

The CHAIR: We will resume. I would like to welcome Mr Genever and Mr Krpan from Sustainability Victoria. Thank you for your time today. We are looking forward to your evidence. I am just going to go through some formal stuff. All evidence taken at this hearing is protected by parliamentary privilege, as provided by the Constitution Act 1975, and further subject to the provision 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.

All evidence is being recorded. You will be provided with a proof version of the transcript over the next few days. We have allowed 10 minutes for an opening statement. I will leave that to you. You can share that and take 5 minutes each or take 10 minutes. We are a bit flexible in that area, but we need to make sure that we have got enough time for committee members to ask questions. Who would like to go first?

Mr KR PAN: Good morning. I might open, if that is okay. Thank you, Chair. Good morning and thank you for the opportunity to give evidence on behalf of Sustainability Victoria and the opportunity to make a submission, which will be forthcoming. I will make some brief opening remarks. We are using the presentation, which will hopefully be synchronised with what I will be saying.

Visual presentation.

Mr KR PAN: Sustainability Victoria is a statutory body responsible for facilitating and promoting environmental sustainability in the use of resources. We provide expert advice, waste strategy development, waste education, data collection, funding of infrastructure, investment facilitation and market development programs. We influence the various stakeholders towards best practice waste management and by delivering programs on behalf of and funded by the Victorian government.

We have a number of functions but no statutory powers. We are not a regulator, and we do not set policy, which is delivered by others, although we work closely with the department of environment and the EPA as the responsible regulator to support both of these activities.

SV sits within the Victorian government's environment portfolio. In broad terms that includes the Department of Environment, Land, Water and Planning, or DELWP, who you have heard from previously. That is responsible for policy development and oversight. EPA Victoria is the responsible regulator focusing on compliance and enforcement. SV is the program delivery agency delivering programs and strategies directly into the waste sector and the seven waste and resource recovery groups who are primarily responsible for regional planning and service delivery, including facilitating joint procurement by local government for waste services.

Under the Environment Protection Act 1970 SV is required to prepare the *Statewide Waste and Resource Recovery Infrastructure Plan*, the SWRRIP. This plan provides the strategic direction for managing resource recovery and waste infrastructure in Victoria over a 30-year time horizon.

The SWRRIP has four main goals: firstly, reducing our reliance on landfills; secondly, encouraging resource recovery and recycling through the consolidation and aggregation of waste; raising the standard of waste and resource recovery facilities by improving their performance; and improving the evidence base for decision-making at all levels of government, industry and the community.

The SWRRIP is supported by seven regional plans, which have a 10-year horizon and set priorities for regional, including metropolitan, waste and resource recovery infrastructure, and they guide the activity of the waste and resource recovery groups. Each regional plan has a landfill schedule, which is a regulatory instrument that restricts the availability of landfill airspace in Victoria and by doing so creates an incentive for resource recovery activities.

There are three supporting strategies for organic waste, for waste education and also for market development, and they further guide government and private sector activity in this space.

In terms of this slide, Victoria generates more than 12 million tonnes of waste per annum, of which 67 per cent is recovered for recycling and diverted from landfill. The majority of the waste, about 86 per cent by weight, is recycled locally—in other words, in Victoria. The recovery rates depend on the source and value of the material and are also affected by transport costs. Victoria recovers high percentages of construction and demolition waste as well as metals, obviously because of their weight, their value and low transport costs, by keeping them in Victoria, but low percentages relatively of municipal solid waste.

The Victorian waste and resource recovery sector is large and complex. It employs some 12 000 Victorians across 600 businesses with turnover of around \$4 billion per year. The majority of the sector, more than two-thirds, is privately owned and operated, with the remainder reflecting local government-owned infrastructure like transfer stations and resource recovery centres. The state government does not own any assets.

Victoria's recycling sector recovers around 8.6 million tonnes of material per annum. It is important to distinguish that what I am talking about is solid waste. Most of your conversation this morning was about chemicals, which are considered hazardous waste. What I am talking about is solid waste, which is our role.

We are the leading state in Australia in the recycling of construction demolition waste back into high-value construction materials like aggregate asphalt and glass sand. However, like most jurisdictions in the Western world, over the past 10 years the Victorian recycling sector has taken advantage of strong international demand for plastic, paper and cardboard offshore. China in particular has been hungry for this material to feed its manufacturing sector.

In 2018 China essentially closed the door to imports of foreign recycling by imposing very high quality standards, or low contamination rates, of 0.5 per cent; in other words, any bale of material that was sent to China for export had to have less than 0.5 per cent of foreign material that could not be recycled. This impacted recycling markets globally, mostly because most markets cannot meet that quality standard.

The market for kerbside recycling—that is, material collected from households and sent to material recovery facilities, or MRFs, has been most significantly impacted. Australian exports of mixed paper and mixed plastics from MRFs has reduced by around two-thirds since the bans were enacted. The contraction of markets has resulted effectively in a commodity price crash of these materials. The average price for mixed paper prior to the decision by China to restrict those imports, for example, has fallen from \$225 per tonne to effectively \$50. Similarly, mixed plastics, which are highly valuable—and about 50 per cent of mixed plastics were being exported to China prior to the bans—has fallen from \$250 a tonne to effectively zero.

Victoria cannot easily absorb all of the material it generates as, firstly, our secondary processing industry is not large enough to take in and convert all of the plastics, paper and cardboard that we collect and convert those into new products and commodities.

We need to upgrade the equipment and technologies in our MRFs in order to separate material into clean, valuable streams as required by the manufacturing sector that would meet those quality standards and allow them to be converted into new products. Further investment is therefore needed to increase resource recovery capacity of MRFs and to create domestic markets for that material.

The local recycling industry will need to further develop in order to keep those materials out of landfill, and a key focus for the Victorian government and SV has been to support improvements to sector capability, equipment and market development.

In response to the 2018 China import restrictions the Victorian government released the *Recycling Industry Strategic Plan* on 3 July 2018. The plan provides a long-term blueprint for improving the resilience and efficiency of the Victorian recycling sector. It also includes \$37 million of funding aiming to: firstly, stabilise the recycling sector through an immediate injection of \$13 million in funding to support local governments in recontracting their recycling services; secondly, increase the quality of recycled materials through improved education, improved collection and sorting and more than \$8 million of additional investment in infrastructure; improve the productivity of the recycling sector by supporting collaborative procurement that would bring guaranteed supply

to the market and underpin investment certainty; and fourthly, develop markets for recycled materials by driving demand through government procurement and supporting the development of new products and expanded markets. SV has a significant role to play in delivering programs under the RISP, or that plan. The Victorian government has committed around \$50 million in waste and resource recovery programs, which are in train, that will support the reform of the sector.

SV is also delivering around \$40 million of infrastructure investments funded by the Victorian government. This includes \$25 million towards resource recovery infrastructure—in other words, the equipment that goes into material recovery facilities and other reprocessors, and supporting new and expanded recycling infrastructure in Victoria that has leveraged more than \$80 million of private sector co-investment. Two examples are Repurpose It, which launched a couple of weeks ago, a construction and demolition washing facility, diverting 500 000 tonnes of waste from landfill in the north of Melbourne; and Advanced Circular Polymers—72 000 tonnes of plastics now recycled into food-grade PET, which is a form of plastic.

The Victorian government has also commissioned SV to invest \$15 million for upgrades to 122 local government resource recovery centres to provide a compliant network of e-waste collection points, supporting the government's e-waste ban, which will come into effect on 1 July.

Our current investment in resource recovery infrastructure spans almost 190 projects that have added some 600 000 tonnes of extra capacity for recycling and created 375 new jobs. When the program is finished we will have added close to 2 million tonnes of recycling capacity to the network.

Educating the community on recycling behaviours is also a significant part for the mix of recycling. SV is currently preparing a \$3 million statewide recycling education campaign, with a particular focus on reducing contamination in the recycling bin. Around 5 to 10 per cent of materials placed in recycling bins cannot be recycled. The key contaminants in the recycling bin being clothing or textiles, food waste, flexible plastics like plastic bags and film, and things put in plastic bags, which currently cannot be recycled.

The government through SV is helping the sector to develop high-quality market-ready recycled products and materials. We are delivering a \$4.5 million market development program, which focuses on removing barriers to entry for new recycled products, enabling recycled products to compete on an even playing field with the raw or virgin materials that are alternatives. The government has committed almost \$4 million across 30 projects since 2016 in this area.

Victoria has a history of developing new markets for recycled materials. Over the past decade SV has worked with industry and other agencies such as VicRoads to develop a set of specifications that support the use of recycled materials in road construction. This has resulted in on-the-ground projects which use recycled content. For example, the widening of the Tullamarine Freeway used more than 150 000 tonnes of recycled crushed concrete and some 40 million post-consumer glass bottles in its construction.

The Victorian government has sent a strong signal through the recycling plan that it has a role in creating demand for recycled products and materials through its own procurement. SV is working with the Department of Treasury and Finance to categorise current government procurement spend, identify opportunities and work with departments and agencies to procure further recycled materials and also potentially to consider targets for recycled content. We have a number of projects already underway, with a particular focus on the use of recycled glass sand. That has enormous potential with the infrastructure pipeline in Victoria. Around 80 per cent of Victoria's roads are local roads. SV is working with NatSpec, the specification body, to ensure that specifications for low-traffic roads, predominantly made and maintained by local government, allow for the use of recycled materials, which would position local government to mirror state government procurement work.

Looking ahead, as our population grows in Victoria waste generation will also grow. That has been the trend over the last 10 years, and with the contraction of export markets we need a system that can safely manage all of the waste and recycling that we create. The management of waste in Victoria is a complex system where there are multiple players and none of them holds all of the knowledge or the leaders—in other words, it is a shared responsibility. So the response to our current issues will require effort from individuals, businesses, government at all levels and the waste industry itself. Households and the community can focus on reducing waste they generate and make sure they recycle right. The federal government has a significant role to play in

supporting product stewardship schemes and using its \$70 billion infrastructure agenda to procure more recycled materials to be incorporated in roads and bridges. It can also use other powers at its disposal, such as import restrictions and economic instruments to target non-recyclable packaging and invest in research and development through tax incentives within the commonwealth domain. The waste industry must prioritise the safe management of recycling facilities and invest in newer technologies. Local government can participate in collaborative procurement and must improve recycling contract clauses to improve transparency and waste provenance.

Finally, we know that the state government has a role in setting a clear policy and regulatory agenda, using its own procurement power to increase demand and deliver investment in market development, industry development and new infrastructure, particularly for growing secondary reprocessing and remanufacturing.

We see three areas where we are well placed to contribute further. These are: supporting the development of more secondary processing and remanufacturing locally in Victoria, building on the success of our current investments in industry capability; secondly, developing strong domestic markets for recycled products and materials and supporting state and local government with sustainable procurement of these products and materials, including further work for the potential for setting targets for that material; thirdly, an increased focus on waste avoidance, building on the success of campaigns which have been able to shift attitudes and behaviours, although limited in nature, such as the Love Food Hate Waste campaign.

In closing, ultimately we need to transition to a circular economy. The government is committed to developing a circular economy policy by 2020. A circular economy is one where we design new products that reduce materials and waste. They are designed to enable re-use or recycling, and products and materials are kept recirculating at their highest value use for as long as possible. The natural environment is restored and protected in this way. It is a complex challenge, but ultimately one that we consider can be solved. Thank you again, and I welcome questions that the committee may have.

The CHAIR: Thank you. I will kick off with the first question. The secretary sent us a link yesterday about an interesting process in one of the Canadian provinces, which is now looking at shifting the responsibility for taking care of their recyclable products, like paper, plastic et cetera, back to the suppliers—that is, like the Walmarts of the world et cetera. Looking at that, it is quite an interesting idea. Have you got any view on that as something we ought to consider in Australia or Victoria?

Mr KRPAN: So just over 20 per cent of the waste that is generated in Victoria is generated and collected through municipal solid waste—in other words, it is coming from households. The other 80 per cent is either coming from businesses in the commercial and industrial sector or from construction and demolition, which is effectively about 45 per cent of the waste stream. Unless that material is hazardous, it is not required to be registered or notified as data to either Sustainability Victoria or the regulators. However, hazardous waste must be reported, obviously, to the EPA and to WorkSafe Victoria.

Mr GENEVER: But certainly, if I may, Cesar, you are talking about really the Canadian approach there, which looks at things like extended producer responsibility or product stewardship, which essentially says if you are a manufacturer or anyone in the supply chain it should not just be up to the person that touched it last to figure out the best way to deal with it. That is a specifically useful approach for products that can be hard to deal with at their end of life. So in Victoria, in Australia, we have taken some sort of fledgling activity in that space. We have a voluntary stewardship scheme for tyres; we have a voluntary stewardship scheme for paint. Sustainability Victoria is leading some national work on similar schemes for photovoltaic systems, which we know will be a growing waste stream in the future, but essentially this is the domain of the federal government. The federal government is responsible for the Product Stewardship Act 2011, and unfortunately that is an act that is probably three years out of date now. That was due for a review in 2016, and certainly we are working with the federal government to support them in reviewing that act as well as the national TV and computer recycling scheme, which is a product stewardship scheme we already have in place. Canada is very big on that, Cesar. They have got a number of schemes that look at sort of distributing the responsibility not just at the end consumer but across the supply chain.

The CHAIR: From that, if I take the last slide, which is looking ahead, are there any specific ideas you can take us through? I know you talked about, for example, recovering the product and reusing the product, and you

talked about the sand and procurement and so forth. So are you able to give some specific things? I mean, let us talk about the mainstream, which is paper, plastic, metal and glass. You did talk about glass—using it on roads, et cetera. Specifically, what role can the state government and the federal government play, along with industry, to make sure that product can be recycled and put into good use? The second part of my question—then I will give everyone else a go—is what we do with the residual product to make sure we do not get stuff sent to landfill. So that is sort of a two-part question.

Mr KR PAN: There are a number of options in terms of both state and federal government in relation to intervening in that market, and some of them are already in train but not for all products or materials. One of them is things like landfill bans, or bans on production of certain materials, and those are being explored not only in the EU but in the UK and in parts of Australia, including in Victoria. There are things like bans on plastic bags, which the government has committed to introduce by the end of the year. There are also active discussions from stakeholders and globally around the bans on certain single-use plastics. There are other products. On 1 July, as I mentioned, e-waste will be banned from landfill. So they all kind of send a signal about what needs to be produced and what can be produced in a particular way.

You can also impose restrictions or indeed mandate, which was the point that I was making around targets for procurement. You can mandate recycled content being used in certain things, whether they are government infrastructure projects or indeed whether it is new manufacturing. In California there are laws that require mandatory minimum content requirement for recycled content in things like plastic bottles.

At the federal level, as my colleague has just mentioned, the commonwealth government is responsible for product stewardship schemes. There is a product stewardship scheme of sorts that exists for packaging. Packaging is around 80 per cent of the plastics that are generated that end up either in the recycling stream or landfill—both rigid plastics as well as soft plastics. Clearly glass is a packaging material as well. That product stewardship scheme is not a closed scheme at the national level. It is administered by the Australian Packaging Covenant. It is not a complete, extended producer responsibility scheme, as Mr Genever has pointed out. It only really deals with programs, research and development and education campaigns. It is not actually a closed-loop system in the sense of a regulatory model that would ban any of those items along the supply chain.

My final point—and perhaps Mr Genever can flesh it out—is around procurement. I spoke about government procurement and particularly around infrastructure. In the EU there are green procurement requirements, and they mandate 30 per cent recycled content being used in infrastructure. It is important, when you get to that kind of level of generality, that these are very technical matters in the sense that, for instance, with roads, we have supported the development of six specifications for the use of recycled content in Victoria's roads, and every one of those goes through a rigorous technical process obviously to make sure that the roads are fit for purpose, that they are safe and that they will endure. So it does take quite a long time to develop those specifications. So while I have mentioned that it is 30 per cent recycled content, that is not necessarily directly going straight into a road; it is obviously going through some sort of value-adding on the way.

Mr GENEVER: We have been working in this space, and you point to some really good examples there, Cesar. Glass is certainly one where there is a really current opportunity for Victoria. We are already leading in this space, and I certainly think we can do more. It is our belief that we could get all of the glass in Victoria that is generated every year recycled back into either new bottles or into this glass sand product for the secondary glass that you cannot use in new bottles.

But essentially we have been working with industry since about 2012, and they are very clear: they just want to compete. They want to compete on an even playing field with their virgin alternatives or their raw counterparts. So that is really where we have targeted our activity. They will come to us and say, 'We've got this great product, but we can't get it to be used on the rail network' or 'We can't get it to be used on the road network. There is a barrier in the way. Can you help us?'. And that could be something like a specification that needs to be updated or it can be some sort of performance testing. Particularly in the rail network there are really stringent requirements for that performance testing. So government has a role, and that is a role that we are really proud to play, to support those companies and say, 'We'll help you through that process. We'll help fund you so you can do the research and development work, you can do the testing, you can prove that your product is equal to if not better than the alternative and then it is really up to you to push that agenda'.

I think what Stan has rightly pointed out too—and that is one of the clear actions under the *Recycling Industry Strategic Plan*—is that now we have got an extra lever to use, and that is to work with departments and agencies to say, ‘Hey, these products are available. They compete, they’ve been tested, there are no barriers in the way. What can you do to help procure them and get them onto the network and support that drive, that pull through from government?’.

Mr KR PAN: You also mentioned, if I could just finish off, the residual waste. In many cases the residual waste is effectively—we have tried to recycle, it is not viable either economically or environmentally or because there is a regulatory ban on it and there is some residual. The state infrastructure plan contemplates that there will always be some residual because it is not possible to viably recycle everything. Having said that, some of the upstream levers might be that you put certain restrictions on what is produced and how it is produced in order to impose that obligation upstream on things that actually can be recycled—so avoiding composites and that sort of thing.

In terms of the infrastructure plan, it contemplates *that* residual and it plans for that with a model that kind of anticipates the level. That has been relatively stable over the last 10 years of Victoria in terms of what is actually going to landfill. An alternative is obviously waste to energy—as an alternative to landfill as well.

The CHAIR: Just on that, we have APM giving evidence later on. Maybe I can pause that and allow other members of the committee to ask questions and maybe, if we are able, come back to that and what your view is on that issue.

Mr KR PAN: Sure. Thank you.

Mr HAYES: I have got a few questions. I think it is great what is being done on procurement, and really the scope for doing more there I am certainly very interested in. I feel as if there has been a real crisis in the community, that since the collapse of the market people just think, ‘It’s all rubbish; treat it all the same because nothing’s being recycled’. I think we have really got to restore confidence that something is happening, and it sounds like something is happening, but the public have got to know about it. I am just wondering: what can we do at the state government level to set up mandatory requirements for the re-use of recycled material in products? You were talking about mandating 30 per cent for the government to try and aim for in the way of getting recycled material into procured stuff for road making et cetera. I would like to know whether we have got the head of power to mandate re-use by industry in the state. I am just wondering what we could do with things like banning single-use plastics or mixed plastics, their use and sale, in the state of Victoria. Is that a possible thing that we could do? I just think we could be using money that is in the Sustainability Fund that has been raised from councils and is just being sat on, apparently—if we could be using that in a huge education program towards the sorting of recycled material. In regard to e-waste, it is great that it is banned from going into landfill. There are multiple questions—

Mr GENEVER: I am frantically trying to write them all down.

Mr HAYES: But I want to try and see if we can get these things addressed. We want to make multiple drop-off points for e-waste, possibly at supermarkets or at electronic shops, because I have to drive 10 kilometres to get rid of my e-waste at the council depot, which is certainly a disincentive towards doing it. The other thing is what has already been raised, the alternatives to landfill. I understand high temperature burning is one, and pyrolysis is something else I have heard of. I wonder whether you could talk about both methods and the advantages or disadvantages.

Mr KR PAN: Okay, I will take a couple of those parts, and then I will hand to my colleague. In terms of the community attitudes we are certainly concerned about that. Sustainability Victoria undertook social research in both 2018—just at the time of, I guess, the announcements regarding the impact of the Chinese restrictions, so early in 2018—and also we just repeated that in 2019. Essentially there has been, interestingly, no significant change or erosion in terms of community support for recycling. Victorians are overwhelmingly supportive of recycling, so in 2018 the figure was 85 per cent of Victorians saying that recycling is important to protect the environment in Victoria. In 2019 it was in fact higher; it went to 88 per cent. “It is the responsibility of every individual to put the right items in the recycling bin.” In 2018 that was at 85 per cent; it has gone up to 87 per cent. “It is the recycling companies’ responsibility to remove non-recyclables from people’s recycling”—22 per

cent in 2019 as opposed to 20 per cent. So they are actually improving in terms of the community attitudes and predispositions. As a community we are very strong supporters of recycling. So 90 per cent of Victorians have access to a kerbside recycling collection, obviously administered through local government, but it is in fact, through our social research, one of the key ways in which the community interacts with the environment, and they actually do support it. It is one of the highest penetration rates per tenement in the world.

In terms of, if I could just clarify, the procurement aspect of your question, the EU green procurement guidelines apply to large infrastructure projects, whether they are commissioned by government or industry, is my understanding, and the guidelines that I spoke about in California also apply to industry. So it is possible. Whether it is possible at a state government or a federal level, I am not an expert in terms of the constitution and the taxation requirements et cetera. But certainly those things have been looked at in other jurisdictions.

Mr GENEVER: Thank you. I will try and answer all of those, and if there are follow-ups, please offer them. Certainly in terms of the mandatory targets, yes, there may well be scope for mandatory targets. I do not know whether the government has a heads of power to compel industry to set targets. They could certainly do that through procurement channels. Obviously procurement from government, particularly with large infrastructure programs, works with a couple of levels. Government will procure it out, and there will be a master contractor and they will procure out different parts of that as part of that contract. And they may well be able to set targets through that arrangement so that the contractor sets targets.

I guess I will come back to the approach that we are taking at the moment on the *Recycling Industry Strategic Plan*, which is, firstly, to categorise the spend—to look at where government is spending money and where there might be opportunities for the Victorian government to essentially procure more recyclable materials and products than we already are. So that is the first step.

The second step is within those opportunities—those ones that make sense; those ones that are going to be considerable tonnes to bring into the system—we are going to work with agencies and departments on how best to do that. That may well mean that agencies would like to set targets, and we are happy to work with them on that. And similarly, given the way the infrastructure projects are rolling out at the moment through these individual agencies, it is likely that project-specific targets will also be an opportunity. So we are working with the likes of LXR now, the north-east road authority—there are so many acronyms I cannot remember them all—essentially to do that, to identify where there are opportunities and work with them to see how we can get greater uptake along the system.

In terms of setting bans and opportunities around single mixed-use plastics, obviously the government has committed to banning single-use plastic bags by November 2019; it will be the end of 2019. The government is also investing in a plastic pollution protection plan, I think. There are a lot of p's in there. That is essentially also looking at opportunities for further activity around single-use plastics. That is a question for the department. I am not entirely sure where that is at, but certainly it is an opportunity for government to look at.

In terms of the Sustainability Fund and the role of government there, again, that is probably a question for government. Our core funding comes out of the landfill levy. Obviously the landfill levy is about \$64 on every tonne of waste that is sent to landfill. We are funded to the tune of about \$18.5 million; that is our core funding. The rest goes into the Sustainability Fund. Well, sorry, I should rephrase. The EPA and the regional groups are funded in a similar way. What is left over after all those agencies have been funded goes into the Sustainability Fund. It is up to the government how that is administered. So that is not really a question for us, other than to recognise we are certainly the beneficiaries of that when government chooses to deliver programs—things like the e-waste infrastructure project.

Mr KR PAN: I might just top and tail that I suppose. The first is that there is a \$3 million commitment to a campaign, just going back to that community attitudes survey. And we did that survey so that it would inform how we approach that campaign. But the very clear view from industry and local government is we have to reduce contamination in the recycling stream because that compromises the ability to then recycle it. Not only in China but even locally that quality has to improve.

Mr HAYES: Could I just get you on that? People do put their rubbish in plastic bags—I see it all the time—and then put it in the recycling bin. If we do ban single-use plastics, we should really educate people to put their

rubbish in something else and maybe somehow supply paper bags or something that people can put their rubbish in.

Mr KRPAN: I think that is an excellent point. The government has committed to ban plastic bags, the single-use ones, which are the very small—the very thin I should say—plastic bags.

Mr HAYES: The supermarket bags.

Mr KRPAN: They are really convenient, obviously ubiquitous. They end up in the marine environment and in all sorts of nasty places, but one of the aspects of the fact that they are free currently—although some supermarkets have banned them—and that they are ubiquitous, is that people use them for convenience for recycling. And they should not, because it is a contaminant; it is the biggest contaminant. And the soft plastics actually compromise the ability to deal with the more valuable products and materials, which is the hard plastics, paper and cardboard. So it compromises that machinery, and I understand you will be speaking to some manufacturers who might be able to address that.

In terms of the setting of targets, the other opportunity is around the Australian Packaging Covenant itself. Although I made some remarks regarding it as a regulatory instrument, the meeting of environment ministers, which includes the state environment ministers as well the national environment minister, have already committed to a number of targets. One of those is about 100 per cent recyclability. While there is not a target, and I do not think there is support from all jurisdictions just yet, there is an opportunity to mandate disclosure of recycled content—so really, trying to encourage that through the packaging industry and the Australian Packaging Covenant. And obviously there is a scheme that supports that.

We have seen even in the absence of bans, and certainly in the last couple of weeks, that we have had a number of approaches from very large FMCG businesses that are interested in investing in Victoria—and obviously elsewhere where they have manufacturing facilities—in using recycled content for new plastic bottles, glass bottles et cetera. Glass is largely recycled already, but plastics would be a real opportunity, and it is at food grade.

The CHAIR: Thank you. Just before I go to Mr Meddick, are you okay if we need to go to about 12.45? Because there are a lot of questions to cover.

Mr KRPAN: Yes.

Mr MEDDICK: Thank you, gentlemen, for both appearing today and I thank you for your evidence here. Like Mr Hayes I think I have got a draft of questions but they largely centre around two different areas. One is around the roads question and another one is around end use, in supermarkets for instance. Now, the first one on roads—my electorate is one that is very much a rural electorate and the roads fall into three different categories there. They fall into roads which are like major roads, such as the Princes Highway, which is under the remit of federal government largely, but with some sort of state government involvement. Then you have other roads which are the responsibility of VicRoads, and then those that are the responsibility of council.

I have been visiting a number of these shires in the last couple of days and one of the things that they raise is that where those roads that they consider major roads within their shires, but ones that are not under their control—i.e. VicRoads ones—when they need resurfacing or they need completely redoing, one thing that they have all raised is that they would like to see 100 per cent recyclables used in the creation of those roads or at least in the resurfacing, i.e. the use of plastics and glasses et cetera. It is something that is being used quite extensively in Europe, and the question they are asking is: what sort of involvement can Sustainability Victoria play in that in liaising with both VicRoads and those councils to ensure that that actually happens? This is a question that is very much on their minds. They want to see that because they do not want to see more tar roads laid down, which is environmentally obviously not very good.

Moving on then to the end-use plastics situation in another area, I like most people, hate going into a supermarket and seeing fresh fruit and vegetables on plastic trays wrapped in plastic—individual pieces of fruit and vegetables wrapped in cling wrap. It is just absolutely ridiculous that I cannot buy a cucumber that is just sitting on a shelf. So how much of a problem in landfill is this situation creating? And then also, tacking onto that, there is an enormous amount of work being done on the plant-based and gum-based biodegradable containers et cetera. Is there any work or research being done by Sustainability Victoria? And if there is, is there any investment being

put forward to help companies—particularly Victorian based if we can—that produce this type of packaging, to get them into that marketplace so at least then, if we are contributing to landfill, we know it is biodegradable and we are not going to have a problem?

Mr KR PAN: Thanks very much for the question. I have just come this morning from a conference for the Institute of Public Works Engineers Australasia, which is essentially the peak body for local government engineers—200 people in the audience—and the presentation was very much along the lines of some of what we have been discussing this morning, encouraging them to consider procuring recycled content. It is definitely a receptive audience. Indeed we have worked with Hume council, with Whittlesea council and with other councils—Boroondara, from recollection—really in research and development, demonstration and experimentation regarding the use of recycled content in local roads.

As a major road, they are obviously governed by VicRoads and the specifications that relate to performance and safety. We have worked with them over the years to develop seven specifications that are quite technical for those major roads. So one relates to crushed rock, which is recycled concrete, brick and glass; the other is recycled concrete for pavement, which is a sub-base; cementitious treated cut, crushed concrete for pavement sub-base; bitumen crumb rubber, which is the use of crumbed rubber from remaindered recycled tyres et cetera; sprayed bitumen as surfacings, which is effectively the spray seal that goes over some roads and preserves them for a period of time from a maintenance perspective, and it also can then prolong the life of a road that is compromised—it is a specification that we have developed; and then hot-mix asphalt, using glass fines as part of that mix as well. So they are very technical specifications.

Having said that, we have also invested in research and development, including on the use of recycled asphalt. Victoria has the world's first 99.9 per cent recycled asphalt road. It is a project with Hume council that we contributed \$100 000 to, to demonstrate that a local low-traffic road could be used with 100 per cent recycled content, predominantly recycled asphalt—and that is done by Downer EDI, it is the company locally; soft plastics, which are collected by a company called Redcycle, and they collect the soft plastics and packaging that is collected at the two major supermarket chains; a polymer that is based on cartridge toner, and so that creates actually a good binding agent in that road; and then glass bottles that have been crushed and then converted into effectively a substitute for river sand. So it is a combination of those things. We have got a range of other projects that are looking at different applications of various materials in roads, and certainly there is an interest from local government.

We have in the last few months worked with Victoria's chief engineer, Collette Burke. She has been a great addition to, I guess, the complement in the Victorian government, and has a background in engineering obviously but also in roads and infrastructure. She has been working with us and the Office of Projects Victoria; as well as NatSpec, which is the specification-setting body; local government; as I said, the Institute of Public Works Engineers; AAPA, which is the peak body for the asphalt and paving association; and some of the largest companies to develop specifications for local roads. And we see that as a bit of a gap, because if you over-engineer local roads, which is 80 per cent of Victoria's roads, from a local government perspective it effectively means you are setting the standard too high, and it is unnecessarily high. But in the absence of a specification, they go to the highest standard, which is the VicRoads standard. So we are kind of trying to fill that gap in the development of a specification for a lower order.

In terms of plastics and food, I do not like the saying but it is a double-edged sword. Personally in my family we have that conversation about the use of plastics in packaging of food. We are also concerned with food waste. If you look at the residual bin, the red bin, I think 40 per cent of that is food waste, and much of that is avoidable. So our campaign on that program, Love Food Hate Waste, has been really looking at the behaviours that cause food waste. Where we have had some success is in encouraging people to plan ahead for what they are buying in the supermarket and also plan their recipes et cetera on a weekly basis, so that they are buying less of food that is actually then not used.

Indeed the packaging of some foods, while it might irk us—and I am not an expert in terms of what the proportions might be—is actually done to preserve them for longer and it is done to avoid food waste, either in transit or in consumption. So it is a double-edged sword. You are solving one problem, which is the food waste, but on the other hand you are creating an additional one with the soft plastics, which are much more difficult to

recycle. I am no expert in terms of things like corn and starch-based plastics. I will just look to my colleague—he is.

Mr GENEVER: Look, I am not an expert either, but what I will say is: part of the challenge is that there are various parties in the industry who are making various products and making various claims about the degree to which they are either compostable, biodegradable, biocompostable—there is a whole raft of activity. One of the things we have been really clear on is that we are not going to support or fund technologies that we are not clear will actually benefit the industry. It is less of an issue if it is getting sent to landfill. I think we would be very comfortable with materials like this that are going to landfill and decomposing more quickly within a landfill, as opposed to plastic, which lasts for decades, if not centuries. Where the challenge is is things like our organics collection services, because people think, ‘Oh, it’s compostable. It says this bag’s compostable; I’ll put it in my green waste bin’. And what we know from experience with our composting colleagues is that the vast majority of them are not able to be broken down through the composting process, and so they end up as being inadvertently more of a contaminant in one of our parts of our recycling sector in an effort to try and fix another part. So I do not have an easy answer for you.

Mr MEDDICK: Is that an educational fix, though?

Mr GENEVER: It may well be, but I think there also needs to be some consistency in the types of products that are coming onto the market, and I think more of a scientific basis and evidence to show that when these things are coming into parts of our waste and recycling scheme, that they actually behave the way that they are expected to behave and they do either break down or compost or biodigest or whatever it is, the technology you are using. So, again, I do not have an easy answer on that one, sorry.

Ms TERPSTRA: Just some questions following on from that line—I have got an interest in when you go to the supermarket, buying fresh food and vegetables. I have noticed over the last maybe 10 years of increasing usage of just plastic wrapping on things that really is unnecessary. So for example, a cucumber: do we really need it to be wrapped in shrink-wrapped plastic? I do not know that that is necessary. But also I find when you are looking at punnets, for example, which are probably those soft plastics—and I find some of this quite confusing, because we talk about single-use plastics but then we also talk about soft plastics, and I am presuming they can be one and the same thing—they may not be. So I think some of the terminology that is used is confusing as well. There used to be a really good system, and there still is, where when you look at the bottom of a plastic thing—it has got numbers on it to help you decide whether, (a), you can recycle it or not, and I think that system has maybe become a bit obscure as there have been more numbers added to it as well.

Mr GENEVER: It is up to about seven now, I think.

Ms TERPSTRA: Exactly. So I think when it first came out it might have been about three; now we are up to about seven. When that system first came in there was a lot of education around it. I do not think there has been as much education around the adding of the numbers and what you can actually do with it, because you can stand at your bin and go, ‘Now, which bin do I put it in?’ You can take about half an hour to work it out and you may end up just throwing it in the landfill. So I guess where I am heading to is: are you able to perhaps be innovative with supermarkets as well? I know that perhaps in Europe there are different ways. Perhaps consumers might come in with their own containers that they are bringing rather than just buying things in punnets—because it is convenient of course, and as you say it might protect the fresh product, but at the same time it is producing a lot of soft plastic waste.

You have traversed some of this already. You have talked about how perhaps there is some innovation in how you can have biodegradable types of plastics, but then again there does not seem to be a requirement about how it is produced and whether you can rely on what is in it. So I am just wondering whether there is an opportunity for innovation and leading supermarkets and farmers and producers in that area to perhaps reduce their reliance on this type of packaging. Perhaps consumers then can—you know, I think my mother’s and my grandmother’s generation had the old string bag and you would rock up and put your things in there. So that is one thing about fresh produce. But also then we talk about composting fresh produce. It is a lot easier. That can go in a compost bin and it breaks down. But for meat and those sorts of things, obviously you cannot. It has got to go in the rubbish bin. It does not really—

Ms TAYLOR: No, you can.

Ms TERPSTRA: Well, no, I have heard different stories about meat.

Ms TAYLOR: We will agree to disagree.

Ms TERPSTRA: No, I have heard different stories about meat and what you can do and how it breaks down and what does work and does not work, so it is not as straightforward as that. So I am just concerned about whether there can be more education and innovation around that sort of space, how it can happen and what is the best approach for it to happen—and also education.

Mr KRAPAN: Thanks for the question. So in terms of education, absolutely. The government has committed this \$3 million. It is predominantly focusing on encouraging recycling to continue but also on reducing contamination, which is effectively an education campaign. It is the first large-scale above the line, in the sense that it will be underpinned by a broad publicity campaign and TV advertising, et cetera. And we will work closely. We have already worked with 100 people from local government to design the campaign. We have got good evidence and social research that will support it and it will try and demystify some of those common questions.

We already provide regular updates, media, our website has frequently asked questions and what to do and what not to. We advise local government on collection guidelines and things like that, on labelling guidelines for things like apartment buildings to assist people to know which bin to put things in. Predominately we are really good at recycling in the kitchen. So we generally know what to recycle in the kitchen. In other rooms; the laundry, the study et cetera, people start to get confused: can I put an aerosol can, for instance, in the recycling bin?

In terms of rigid or harder plastics and film or plastic bags, that is a common issue that is raised that people get confused with. Obviously soft plastics for the most part are not collected in any recycling bin and they cause the problems that I have spoken about before, but the government has committed to implement that ban later this year on soft plastics.

In terms of hard plastics, the Australian Packaging Covenant Organisation governs the use of that recycling symbol. I call it the recycling symbol with some concern because the numbers there do not relate to recycling; they relate to the nature of the plastic that is used to construct the packaging. So for instance, I unpacked a shirt last night and the soft plastic, the film that is around the end, has that label because it has been imported in from the EU, but it is not recyclable in any kerbside recycling here. So that is an area of concern and of common misconception.

The Australian Packaging Covenant—the Victorian government has been really forthright on this. Its discussions with the covenant have been to move away from those numbers in the triangle—not necessarily the recycling symbol but the numbers, because they are confusing—to a better scheme. Last year they launched a better, clearer label that relates to the percentage, whether the item is recyclable from a technical perspective and whether it is capable of being recycled locally. The information that is now on the label allows you to look up for information. Ideally that will then link to other real estate on the labels, for instance. So for things like barcodes, that would allow you to look at the provenance of the item; where did it come from, what is it produced with, is it recyclable? We would contend that it should also say whether the product contains recycled content.

So in terms of the waste hierarchy, that encourages waste avoidance, obviously before you get to the recycling, and that was my point about designing for recycling. The discussion around single use plastics, and single use plastics can be recycled for the most part, is that they can be avoided altogether because they are completely throwaway. They are produced at one end and they are thrown away. Even if they are recycled, if they are unnecessary, things like soft plastic bags, then that is the discussion there around things like bans. The government has agreed to do the plastic pollution plan to look at what the options are, and what the volumes are of that material.

We do work to some extent with supermarkets not only on food waste but also on packaging. As I mentioned before, not in all cases but in some cases the soft packaging that is around, the flexible films or whatever, are trying to preserve the foods for longer, and particularly in transport. Food is also an issue in terms of impact on the environment. It causes leachate in landfill—as I said, 40 per cent of the residual bin—and it is a big contributor to greenhouse gases as well.

Mr GENEVER: On your question about compost, which was a really good one, certainly there are really significant opportunity there, as Stan said before. About 40 per cent of what goes in our household bin is organic. Around 60 councils in Victoria already have a garden organics collection service, which is great. What we are seeing now and what we want to see much more of is that there are about 19 councils that have gone that step further and moved into what is called 'FOGO', which is combined food and garden organics. Depending on the technology at the end of it, Victoria, through a series of collaborative procurements over the last five years, has now got some really high-end recycling infrastructure for organic waste, like the Veolia facility at Bulla and the new Sacyr facility that is about to open in Dandenong. They are capable of taking things like meat, so they can have a mixed food waste stream. The challenge is making sure there are no plastic plates and forks and bowls, et cetera, in it. But a strictly organic bin can absolutely go and be composted into good quality compost and then see that compost go out and add carbon and add nitrogen into the soil and then come back as part of a circular economy.

Ms TERPSTRA: So in your own backyard composting bin? That is why it is interesting. I was told not to put meat in the compost bin by a gardening centre.

Mr GENEVER: Yes, so certainly—

Ms TAYLOR: It depends—

Ms TERPSTRA: No, I am just saying. So there is confusion around what you can, and it might have changed but I am just saying that goes to my point about education, right?

Mr GENEVER: Yes.

Ms TERPSTRA: So when things do change perhaps the industry has not kept up with being able to educate people around it. The other question I has was around—I think you mentioned earlier—contamination, but you were saying clothing and textiles. So what innovations can be had around that? I know there are some not-for-profit organisations that will do regular collections. They will say, 'Put out your clothing'. They will give you a blue bag and you put it out the front and things like that. Are there any more of those recycling innovations and support for industry to recycle textiles? And if there is some innovation, what are they? Are you aware of them?

Mr KR PAN: Yes. We work to some extent in relation to textiles, but the products and materials we have focused on are those that are highest in volume or that have the most significant risk. So for instance in relation to food waste, it is the volumes as well as the fact that they produce methane. Textiles also produce some methane when they decompose, but it is much less than anything to do with food. And there is quite a robust industry, as you say, with the charitable recyclers, and also with some large collectors and aggregators that are vertically integrated that are able to process that stuff. They are not immune from global commodity prices. Our view in relation to some of these other products that are being collected is that they may also be trade exposed, because they are valuable commodities but they are internationally traded, and some of these markets are also closed. So everything we said in relation to plastics, paper and cardboard applies to other products and materials, so e-waste or, for instance, textiles.

You asked about innovation and industry, which I think is a great question in the sense that there are some fantastic innovators and manufacturers here in Victoria locally. Even in relation to something like soft plastics, which we have discussed as a concern, Replas, which is a company in Melbourne's east, is producing really high quality things like drain covers, which can be specified and are regularly specified by both commonwealth, state and local governments as part of their infrastructure and maintenance—things like park benches, modwood, which is obviously a substitute for traditional timber to be used on deckings and that sort of thing.

We are working with a company in Mildura called Integrated Recycling, which is one of these innovators. They are currently the only company in Australia that converts soft plastics into railway sleepers, and we have funded the trial for those to be used as a railway sleeper, as a substitute. Indeed although it comes from recycled content, the early indications are that it performs better than timber: it lasts longer, it compacts better and it will have better properties in the field. It is the subject of some specifications that are being used by the Metro Rail Authority—and it will be piloted, and those specifications will facilitate the use of that—and it is also used on tourist railways like Puffing Billy.

Dr RATNAM: Thank you very much for your presentations this morning. I do have omnibus questions, like my colleagues, but I might ask them sequentially if that is okay, because they build on each other. So we will pause after each one. Can you tell us about when Sustainability Victoria became aware of the China's National Sword policy and its implications, and do you think more could have been done to anticipate and mitigate the crisis that we saw unfold as a result?

Mr KR PAN: In checking my records—so to explain I have been the CEO of Sustainability Victoria since 2012. For six months during 2017, and they were the last six months of 2017, I was on secondment to the Department of Environment, Land, Water and Planning and was the CEO of the Victorian cladding task force and worked independently and relinquished my role for that period. I returned in December just before Christmas of 2017. On 1 February 2018 I received correspondence that had been shared widely through the industry. It is publicly reported. It was correspondence to our minister—and I was copied in—from five companies in regional Victoria, some in the west, some in Gippsland and I think one in the north of the state. It was effectively a delegation asking for a meeting to discuss a proposed ban by Visy—not a ban, I should say, a decision by Visy that they would no longer take recycled material from those collectors from regional Victoria.

That obviously precipitated a conversation about the effect of China's National Sword policy, so that was on 1 February I received that email. We engaged in those meetings, I was present at those meetings—including with Visy and SKM and Polytrade, who were the three predominant material recovery facilities—to understand the impact of the China National Sword, and by 8 March that emergency package, which I mentioned, the \$13 million, had been announced by the minister and the government. Twelve million dollars of that went to support local government, to recontract their services with the collectors and material recovery facilities. There is a whole range of different contracting models. Some of the local governments contract directly with either a Visy or an SKM or a Polytrade for recycled materials; others have a collector in between, so for instance from recollection one of those companies was Tambo Waste, and they are a collector in regional Victoria. They need to then pass that on to a material recovery facility, and some of those are in Melbourne, and obviously that was Visy.

Dr RATNAM: I am sorry to interrupt. I put this question to DELWP as well, because it seems like there was forewarning to the industry for some years prior to this. China started to ratchet up their warnings to the industry, to the World Trade Organization, indicating that they were going to become more restrictive about this, and one of the questions that I have is about who should have ultimate accountability and responsibility for this inadequate preparation for something that we rely on so heavily? You quite rightly stated that the vast majority of Victorians are so committed to our recycling program and have been devastated by the collapse of it. But who do you think should maintain responsibility? Is it the government agencies that are given different parts of this responsibility or is it the state government?

Mr KR PAN: Thank you. As I said earlier, it is a shared responsibility. No one player, whether it is the state, the local, the federal government or industry have all of the levers at their disposal, or indeed all of the knowledge.

Dr RATNAM: Do you think they should have?

Mr KR PAN: If I could just explain the context for your question regarding the earlier warning.

Dr RATNAM: Sure.

Mr KR PAN: In 2013 China had announced this Green Fence policy, and that was widely spoken about. Having said that, that did not ultimately impact on any recycling markets or offshoring, as we have described it, in Australia. In other words they had made those announcements in 2013, had not enacted them, and indeed the immediate response, even to the announcement, was, as I understand it, that the Chinese manufacturing sector was concerned that they were not getting enough product in terms of feedstock for producing more manufacturing of plastics, paper and cardboard.

As I said—or I might not have said, actually, sorry—30 per cent of paper and cardboard was being exported at that stage, predominately to China, and 50 per cent of plastics were going there, but they were valuable commodities that were being traded. In terms of the impact, my recollection of that period of time between 2013 and 2017, and then subsequently coming back into this role, is that it was seen as an announcement but

that it was unlikely to affect any significant operations in Victoria, and for that reason I am not aware of any contingency plans in the industry or in the state government or local government or indeed at a federal level to explore whether those bans would, at a global level—given that the commonwealth government is responsible for international trade—have a conversation with the World Trade Organization, for instance, about whether there would be an impact on Australia.

Indeed, in terms of industry, which you would expect understands those global commodity markets, effectively we are observers of those global commodity markets. We do have some insights and we now publish—we have just published, in fact, the first indication of global commodity prices for some of the recycled materials that are being offshored. We can only do that by voluntary reporting from industry and local government about the volumes and the materials that they collect and where they are selling them to, and again there is an issue around data quality because they are not mandated to provide that.

Dr RATNAM: Sorry to interrupt. I am just very mindful of the time, sorry. I have to rush so other people have opportunities as well. You talked about the proportion, which was really helpful, of the amount that is being recycled across Victoria, how much is being exported overseas, and 14 per cent of 67 per cent that is collected for recycling you said was going to our export market. That is one portion, not the majority proportion of recycling. Why was that shock in the system enough to collapse the industry to the crisis levels that we had where our recycling was going to landfill?

Mr KR PAN: So to be clear, what you are calling the ‘collapse in the system’ affects the material recovery facilities, which are at the end of a supply chain, if you like, from local government kerbside recycling.

Dr RATNAM: Yes.

Mr KR PAN: As I mentioned, that is just over 20 per cent of all of the waste being generated.

Dr RATNAM: Of the recycling, yes.

Mr KR PAN: And of that I think just over 40 per cent is recycled, so it is that volume that is over, from recollection—

Mr GENEVER: That is 600 000 tonnes.

Mr KR PAN: It is 600 000 tonnes per year going through material recovery facilities. The overwhelming majority that is being generated and recycled is going through other facilities, so it is not actually going through these. So in terms of global prices collapsing, and obviously the fact that for some months recycling was going into landfill in Victoria, that is a product of that price collapse—but it did not affect other markets, and obviously we are watching those markets closely. When we started meeting with industry in February, obviously the significance of the impact of those restrictions became clearer, and obviously that led to prices being passed through. So from councils receiving a rebate for recycling that was being collected at kerbside—

Dr RATNAM: Yes, they had to pay.

Mr KR PAN: at varying degrees all around the state to actually having to pay for recycling, that is where the government’s bailout package of the 12 million fitted in in order for them to recontract because of that commodity price decrease. We started engaging with the industry. My recollection of that period was that the industry was also taken by surprise and that those matters are on the public record from some of the largest waste companies and recyclers in the country being seen as a reflection on the industry also being surprised—the effect became very quick and moved through the entire system obviously very quickly and against anybody’s expectations.

Dr RATNAM: You talked about procurement being one of the potential solutions—increasing our procurement targets—potentially in a mandatory rather than a voluntary system. What do you think are the strongest levers to achieve that—so potentially a procurement target for state government contracting and procurement? Could a local procurement target also be impactful, and should it be in legislation as opposed to these voluntary-type systems that we have?

Mr KR PAN: Given that it is a shared responsibility—we all consume and we all generate waste, and most of us like to see that waste recycled, and most of us do not like it going to landfill—we have all got a role to play in that. So from a consumer perspective we can choose what we buy. We can avoid packaging, we can buy things that are either made with recycled content or that are recyclable and actually set that demand and do that consciously. From a local government perspective, obviously the waste and recycling system, if you like—the collection and transport of waste that is from, essentially, homes and households, the municipal waste system, if you like—all of that is procured by local government. And also local government is a big purchaser of infrastructure, roads—as we said, 80 per cent of roads are local, and they are administered by local government. So in all of those aspects, local government has that power to procure.

Dr RATNAM: So would a mandatory target for local government, for example, be powerful, do you think, in changing the supply?

Mr KR PAN: It is going to depend on the product or the material, and I am loath to say that I would encourage mandatory targets at this stage because we just have not done the systematic assessment of all of the categories, even across the state government, of what is being purchased. It is clear that in some cases we are the largest purchaser of certain goods and services.

Dr RATNAM: Yes.

Mr KR PAN: So if you think of paper, for instance, the state government already procures recycled paper for that reason. That can transform markets. It can incentivise innovation. You could look at other products and materials. For instance, I understand the zoo has banned single-use plastics. They have now moved to ban the purchase, or the sale, I should say, of water bottles for that reason. They are kind of trying to lead with their chin and provide some leadership to say, ‘We will not procure these things or encourage them’. That is available to everybody in the supply chain.

Dr RATNAM: Could I just add one more thing? In terms of targets, and you talked about the shared responsibility across government departments for this, does Sustainability Victoria have a target in terms of reducing the residual waste—what are your targets for increasing the recycling in Victoria and reducing the amount that goes to landfill—at all?

Mr KR PAN: We do not have a target currently either within Sustainability Victoria or generally in the state government around recycling or the residual waste scheme. We have in our business plan identified that we would like to move the total resource recovery rate from 67 per cent to 71 per cent.

Dr RATNAM: By what date?

Mr KR PAN: I might have to take that one on notice because I do not have the business plan and strategy with me, but we have taken that as more of an aspirational target. But that is not divided between the respective waste streams. We have generally avoided targets without implementation plans and clear funding because each one of these waste streams has a very different market dynamic. So rather than saying, ‘We’ll recycle 100 per cent or 50 per cent’ or, ‘We want to move to 70 per cent or 80 per cent’, you have actually got to understand that it is a very complex system and that every product and material has a different market dynamic about where it is generated, how it is collected and how it can be processed or reprocessed.

Dr RATNAM: Would a container deposit scheme—

The CHAIR: Can I interrupt, Dr Ratnam, because we are nearly running out of time—we have got 15 minutes and other members need to ask questions. Can I ask for the questions to be short and the answers short. Also I would like to flag that more than likely Sustainability Victoria will be called in again. You are putting in a submission as part of a whole-of-government approach as well. I think there is a lot of interest in that, so members will have further opportunity to quiz you on these matters. Can I move to Mr Limbrick, and I will come back to you.

Mr LIMBRICK: I would like to ask questions in a couple of areas. Firstly on the e-waste ban that is coming up on 1 July that was mentioned. Can you just describe briefly for the committee what are the components of e-

waste and the trends that you are seeing in e-waste—what is it exactly? And what are you doing to deal with this landfill ban from 1 July?

Mr KR PAN: Generally e-waste is considered to be anything with a plug or a battery, so effectively everything that is electric or electronic. It includes TVs and computers. It includes things like whitegoods, fridges et cetera, which for the largest part are already recycled. It will apply to things like solar PV and batteries in due course as well as some of the first generations of those technologies come to the end of life. The government committed to that ban in the 2014 election and it will be implemented on 1 July. It will be implemented as a regulatory scheme. It is a mandated scheme and it is based on that shared responsibility from generator to collector and indeed to the recyclers and landfillers. They, from recollection, have to do everything that is practicable to prevent e-waste going into landfill. There is a product stewardship scheme administered by the commonwealth that relates to TVs and computers. For the most part they are recycled, and there is a regulatory system that overlays that. For the most part anything with steel in it is a pretty lucrative market. We recycle almost all of the steel, so you can imagine that whitegoods are a part of that. Then there is a whole category in between of everything with a plug, as I say, or battery.

The ban will come into place on 1 July. From last year we have been working with local government directly around the preparation of infrastructure for the collection and storage of that. As I mentioned, the largest infrastructure program in the government's—and certainly SV's—history of \$15 million has been invested in 120 facilities across 60 or so councils to prepare them for that ban when it comes in—

Mr LIMBRICK: Is that primarily like storage facilities?

Mr KR PAN: It is collection and storage, and the reason that is important is that there is a regulatory scheme for how you need to store it. If it is collected in that way, it becomes hazardous, because it obviously includes batteries which can leach. It can include other components which can leach as well. It is a hazardous waste. That means that it is also the subject of international regulations around the international trade of hazardous waste, including e-waste, and for that reason it has to be compliant. It obviously has to be stored in a way that it is not prone to fire and that sort of thing. That is the first step.

The other step is working with industry and encouraging investment in new technologies to have that product and material recycled and refined in Victoria. We do have a number of recyclers and interest in the pipeline of new innovations and recyclers in things like PV recycling or indeed recycling of some of those other components—TV screens, for instance, and computer screens. One of Australia's only battery recyclers is in Victoria.

Mr LIMBRICK: Are there any PV recyclers operating now in Victoria?

Mr KR PAN: I am not aware of that. Certainly I can take that question on notice. There is certainly interest in recyclers—global recyclers are looking at that stream. Indeed earlier this week I was approached by a recycler in regional Victoria to meet with us to discuss how they can get involved, ahead of the e-waste ban, in PV recycling.

Mr LIMBRICK: With these storage facilities, this is going to be a whole bunch of new facilities within landfills. Could this be expanding the problem that we have seen earlier with other waste streams where they end up with stockpiling because there is no market for these things? This is a bit of a concern of mine.

Mr KR PAN: I understand that, and thank you for the question. They will not be located at landfills. Some of them are because there is a recycling precinct attached to a landfill, and that is something that we have encouraged over the years, but some of them are transfer stations and collection stations all across the state. We refer to that as a network of collection stations, and all of them will be upgraded and all of them will effectively be enclosed to ensure that they are safe. The vast majority are run by local government, obviously.

The collections occur in different ways in different places. Sometimes it is a drop-off situation. Sometimes councils will actually collect them or they will have drop-offs at convenient locations. In my council's case, they collect e-waste from the kerbside and they do that on a regular basis. All of those then need to be aggregated. The reason we are consolidating and aggregating, other than safety, is in order to make them more lucrative or, if you like, to have them as commodities that can be traded. There is value in the products and materials in e-waste—obviously I mentioned the steel. They are very unlikely to come through this network. It is more likely to be

things that have batteries or things that involve hard plastics which can be shredded and recycled—there are some recyclers locally that do that—and TV screens and that sort of thing.

Mr GENEVER: If I could add, I would not actually class these as new drop-off facilities. We already have more than 200 transfer stations and resource recovery centres across Victoria accepting e-waste. These are the mostly local government-run facilities. When we did a large assessment of the network, of the vast majority of them, I think it was only six that were in compliance with what the requirements will be when the e-waste ban comes in. The other 194-odd sites are accepting e-waste in conditions that are not conducive to safety in the act. So what we are doing is targeting best practice infrastructure at these 122 sites—this primary network of sites—which are usually the larger transfer stations, so that instead of someone coming and dropping off their TV on a grass patch in the middle of an old transfer station, they can take it to a compliance site with a hard-stand surface with a covered area so it is in compliance with the requirements.

I will also add that that is actually just a fairly small part of the overall network. The overall network of drop-off points for e-waste in Victoria is well over 1000 sites, and that represents a whole stack of sites that exist under the National Television and Computer Recycling Scheme, under schemes like MobileMuster and under schemes for batteries. There is a whole raft of other sites in addition to these 122 sites that we are supporting that actually give a very, very good network. In terms of our analysis, when we have mapped all these sites, 98 per cent of Victorians can access an e-waste disposal point within a 20-minute drive from their house, and that is much greater than, say, states like South Australia which have also implemented similar bans. So we are really confident that we have got a very good network in place that will allow safe drop-off and collection of material in a safe way.

Mr DAVIS: I apologise for not being here for all of your presentation; I have got the notes and have followed some of that. I just want to understand the funding sources and the expenditure of Sustainability Victoria. So, just going through your annual report, Sustainability Fund grants to Sustainability Victoria \$21.1 million roughly—I am rounding those figures out. And the other grants—so that landfill levy is listed as \$19.3 million and government grants at \$21.2 million. So it seems to me they are the two large revenue sources that you have. Are they just pooled and then granted out, or are there rules around what they can be spent on?

Mr KR PAN: Sure, thank you for the question. The annual report that you are referring to, is that 2017–18?

Mr DAVIS: It is, yes.

Mr KR PAN: Thank you. In broad terms—and I can talk about this current year, if that assists, as well—the landfill levy is distributed through a number of agencies, all of whom are responsible at some point around waste and recycling. It includes the EPA, SV, the waste and resource recovery groups. That allocation out of the landfill levy—

Mr DAVIS: The EPA manages it in the sense that it makes—

Mr KR PAN: The EPA collects it at landfill, so it is obviously effectively a levy on every tonne of waste that is going to a landfill. So as a truck comes in on the weighbridge, it is being measured—that is a regulatory scheme; there is a mandatory component. It is about \$65 a tonne, with some variations, for the most part in metropolitan Melbourne, and that is imposed effectively as an economic signal to disincentivise landfill and obviously encourage waste and recycling. So that amount is then distributed; it is distributed through a ministerial determination. That ministerial determination is effectively our ongoing core operating revenue, and the \$19 million that you refer to, which is pretty consistent with this current financial year, is our core operating revenue. So in other words, to keep Sustainability Victoria going, employ staff, run programs, all of the governance et cetera.

Mr DAVIS: So that is the substance of where I want to go. I want to understand how much of that money is spent on administrative costs and then how much is spent on the specific programs, some of which you have outlined, and what the rules are for how that is spent. Is there an agreement with government that you can only spend it in certain ways? How does that apply?

Mr KR PAN: There are other components to our revenue and to our program funding which you referred to which I have not spoken about in that \$19 million—\$19 million operating core revenue, again, consistent with

other agencies. It is then supplemented by tied funding to support government programs. So in most of my discussion today where I spoke about a dollar amount that is sourced from the Sustainability Fund. We have somewhere between \$40 million and \$50 million of programs that are funded by the Sustainability Fund, which is the residue—

Mr DAVIS: Which is also funded by the landfill levy.

Mr KRPAN: That is right; the landfill levy can be distributed through a ministerial determination. The residue becomes a trust fund called the Sustainability Fund, and that Sustainability Fund can only be allocated by the Premier and the Minister for Energy, Environment and Climate Change, who is obviously our minister. It is allocated generally, as I understand it, through the state budget process in May, and it is at that time that we would be advised whether there are any programs which we have been asked to deliver and the source of those. They are identified in the budget papers, obviously, from the state budget in terms of source and then revenue. And then we have got commitments to the Sustainability Fund, which we do by an MOU. That would have: what is the program, what are the KPIs or targets, how will you spend the money and what portion can be attributed to staffing costs, for instance, or administration. So the bulk of the programs are actually coming from that amount. Our budget this year is \$140 million. Only \$19 million of that is this core operating revenue from the landfill levy. The remainder is a combination of the Sustainability Fund and then funding from other sources, but the bulk of it is coming from the Sustainability Fund as a tied funding allocation to government programs. They are not all waste programs, although that is the vast majority of them.

The Environment Protection Act decides how that money can be administered and it restricts its use. In other words, the trust fund is a hypothecated fund, and it is hypothecated for two reasons. One is to promote the sustainable use of resources, which obviously relates to waste and recycling. It has been used in the past around landfills—closing landfills and incentivising that or replacing landfills with transfer stations—to recycling and to education programs. Largely they have gone to infrastructure. The second component of the hypothecation is for climate change, and that from recollection can relate to either mitigation or adaptation matters. So in order for the government to make that allocation, if you like, from the trust fund at any point it must meet either of those two criteria, and it must be approved by the Premier and the minister. It is administered by the Department of Environment, Land, Water and Planning, and obviously we are accountable then to the department and also to the minister in terms of public reporting. They provide an activity report on everything that is funded out of the Sustainability Fund—that has been the practice in the past. We report on all of our funding as well as our programs and what has been achieved in any given year through our annual report. Obviously we have got a business plan and strategy. We have a board that determines—

Mr DAVIS: Yes—

The CHAIR: Mr Davis, we are already over time.

Mr DAVIS: Perhaps could I just ask, then, on—

The CHAIR: No, no. I was going to suggest something to help you out. Can I ask members—maybe we can ask this question, take it on notice, and any other questions you have not asked yet we can send through the secretariat for you as well. As I said earlier, more than likely we would like to see you back here for a few hours after the submission is done. So Mr Davis, quickly, and I have got Ms Taylor and Dr Ratnam for quick questions, quick responses, and have in mind we have got about 3 minutes to go.

Mr KRPAN: I will be very quick.

Mr DAVIS: Essentially what I am after, to understand what is—and I am not being critical—just a murky what comes in and what goes out. I want to see the sources of funding, 2017–18 first and perhaps this year, which we are about to finish quite soon, and then an equivalent for how it is spent for those two years. And the third thing that would be helpful is those MOUs and directions and agreements that lay out how you can spend it and what you can spend it on. I mean, there are have been some expenditures—the solar tram, which people I think scratched their head a bit—

Mr KRPAN: The solar tram was not funded by Sustainability Victoria.

Mr DAVIS: It was not yours. I am pleased to hear that.

The CHAIR: Okay, that is on notice.

Mr KR PAN: Can I just finish the answer about the board, with your indulgence, Chair?

The CHAIR: No, we are going to take that on notice.

Mr KR PAN: Okay.

Ms TAYLOR: So there are two limbs to the question, one on a state level: your capacity versus, say, other states in terms of landfill levies—so, say, South Australia and New South Wales and how we compare. Your overall capacity to do the things that we are wanting to get done. The other limb is: I was actually on a council—that is why I was disagreeing with the point before—where we introduced FOGO, but we did not use plastic. We said, ‘People, don’t use any plastic to wrap your stuff, biodegradable or otherwise’. It was able to take meat and bones, but obviously not all compost can, and I think that is the other limb to that, that your home compost generally will not unless it is very hot. But the point I am trying to get to is: how far can we go realistically to reduce the overall waste load without federal government intervention? I know you spoke before to the missing components there in terms of, say, with packaging—that it has to be done on a national level, if I just focus in on that. Is that because manufacturers tend to operate not necessarily state by state. Is it more of a sort of pragmatic element? I am putting a devil’s advocate there I guess.

Mr KR PAN: It is a combination, that large FMCGs—so fast-moving consumer goods, food et cetera, are those that are using packaging; it is not all about food, but let us say food and drink—are national companies and indeed multinationals. So the commonwealth government, with the support of the states, developed the Australian Packaging Covenant Organisation, and there is a regulatory framework, if you like, for the Australian packaging covenant, and a governance framework. They also have a board that consists of some of those companies with strategy et cetera. We would be happy to provide information regarding APCO and how that works and our interactions.

Ms TAYLOR: That would be good. Thank you.

Dr RATNAM: I would like to put one question on notice and ask one question; hopefully you will have some time to answer it. The first one is about container deposit legislation. We have seen that almost every other state in Australia, except Tasmania, has or has committed to introducing a container deposit scheme. Queensland, for example, has just announced one. It has been a raging success—450 million containers returned in six months, generating 630 jobs and \$44 million for individuals. In Victoria such a scheme could also deliver very important high-quality sorting for our recycling and increase our low municipal recycling rates. Could I put a question on notice? Could a scheme in Victoria be just as successful as what we have seen in Queensland, and why do we not have one?

My last question is about the plans that have been touted to burn Victoria’s waste, incinerate our waste. This relates to your targets to reduce residual waste and how much is going to landfill. So we currently have two waste incineration projects proposed for the state. The one in Maryvale, the incinerator will need to burn 520 000 tonnes of municipal waste and 130 000 tonnes of commercial waste every year, and the one in Laverton—200 000 tonnes of municipal waste. Together these projects will require 60 per cent of all waste collection from kerbside landfill bins across the state. I have also heard there might be a third proposal coming through the pipeline. So if cash-strapped councils get locked into 25-year contracts to supply this volume of waste and face financial penalties for not meeting these volumes, does this not act as a disincentive to implement other resource recovery schemes like food waste kerbside collection like we have talked about or better recycling programs and increase our recycling targets and reduce waste to landfill amounts and reduce residual waste amounts across the state?

Mr KR PAN: Thank you. We will take the question on notice.

The CHAIR: Mr Atkinson has not asked any questions.

Mr ATKINSON: Just one very quick one. Given the challenges with waste collection at the moment—what has happened in China—can you advise us, and I am happy to have it on notice, of any bids that you have made on the Sustainability Fund that were not accepted or not given any funding in this current period?

Mr KRPAN: Thank you. We will take the question on notice.

The CHAIR: Okay. Nothing further? I know there are a lot of questions that need to be asked. We will send you some questions through the secretariat and will appreciate your response. Also, as I flagged, you are putting a submission in as part of the whole-of-government submission. We would like you to come back, and I reckon it will be for a number of hours at the next session because there are a lot of questions and I think you are the right agency to answer a lot of the questions, because now we are focusing on recycling and the whole issue of waste in general; we have moved on from industrial waste. Gentlemen, thank you very much for your time, and we look forward to seeing you when you appear next.

Mr KRPAN: Thank you.

Witnesses withdrew.