T R A N S C R I P T

LEGISLATIVE COUNCIL ENVIRONMENT AND PLANNING COMMITTEE

Inquiry into recycling and waste management

Melbourne—Friday, 10 May 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

WITNESSES

Mr Craig Dunn, General Manager Communications and Sustainability, Australian Paper and

Mr Ben McLean, Strategic Projects Manager, Australian Paper.

The CHAIR: Now we will move on to the last witnesses for the day. I would like to welcome Mr McLean and Mr Dunn from Australian Paper. We are just going to go through some formal stuff before we take evidence. I thank you for making yourself available today. All evidence taken at this hearing is protected by parliamentary privilege as provided by the Constitution Act 1975 and further subject to provisions of the Legislative Council standing orders. Therefore the information you are about to give today is protected by law. However, any comments repeated outside this hearing might not be protected. Any deliberate, false or misleading evidence to 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 in the next few days. We have allowed, I think, 5 or 10 minutes for you to tell us about what APM is up to and what your solution to the current inquiry is, and after that we will go through questions. Before I go on to questions, just because we have scheduled this session until 2.30—we might be able to go slightly over that—but I would also like to remind members, if we are able, to restrict questions to two questions each to start off with and if we can have brief answers. We are happy for you to actually put in supplementary evidence or answers to questions later on. So now who is going first?

Mr DUNN: I will go first. Thank you. So I will begin with an opening statement. Australian Paper has been established in the Latrobe Valley since 1937. We manufacture close to 600 000 tonnes of packaging, print and copy paper annually, and products made from our paper are used every day in homes and businesses all over Australia and indeed around the world, as we sell to around 75 countries as a major exporter from the port of Melbourne. We are one of the Latrobe Valley's largest employers, with approximately 850 full-time employees, and we support just over 2300 jobs and contribute around $450 million to the economy of the Latrobe Valley region. Australia wide our operations support just under 5800 full-time jobs and contribute around $900 million to GDP, and each ream of copy paper we produce contributes just under $1.90 to government revenues. We have invested significantly over the past decade in our operations, and further investment is key to our future, which leads us to the topic today.

In addition to the current recycling issues facing Victoria following the implementation of China's National Sword policy, Melbourne is facing a second waste crisis for its general household waste. Within the next few years the last significant putrescible landfill in the south-east Melbourne region will close, and currently there is no alternative to this landfill. Australian Paper has conducted a feasibility study into the construction of an energy-from-waste facility that will bring Victorian waste disposal into the 21st century using proven, best-available technology widely accepted in Europe. This project will go a long way to solving Melbourne's impending landfill crisis, with the next step being securing contractual agreements with local councils to supply municipal waste to the facility.

Australian Paper is Victoria's largest generator of baseload renewable energy, but we are also the state's largest industrial user of natural gas and a significant consumer of coal-fired electricity, so we are exposed to increasing energy prices and supply uncertainty. One of the key challenges that we are facing is to stabilise our energy costs. We are partnering with Suez to develop a $600 million-plus thermal combustion energy-from-waste facility adjacent to the Maryvale mill in the Latrobe Valley. The facility would provide essential waste management and resource recovery infrastructure for Victoria and, we estimate, reduce net CO_2 emissions by around 540 000 tonnes annually.

Energy from waste, or EFW, is recognised as a proven and reliable technology in Europe, North America and Japan, having been used for decades. There are over 500 operational EFW plants in Europe alone, many sited in and around major cities. EU countries, including Germany, Austria and Sweden, utilise EFW as a key component in the waste management hierarchy to reduce landfill to almost zero.

The Maryvale facility would require approximately 650 000 tonnes per annum of residual waste, which would otherwise be sent to landfill. It is proposed to use municipal solid waste, or MSW, sourced from contracts with councils for around 80 per cent of the fuel input, with the remainder coming from commercial and industrial waste. We are not planning on taking any recyclables from the recycling stream into our facility.

The waste would be sourced primarily from south-east Melbourne and Gippsland to be transported via rail and road. We are very fortunate to have our own rail siding at Maryvale, so we are looking to optimise that transport option for waste. The project would support our existing jobs and create a further 1046 jobs on average each year for the three years of construction and around 900 direct and indirect jobs thereafter, it is estimated. It would also address the modelled closure of the Hallam landfill, which takes 550 000 tonnes per annum out of Melbourne's waste mix. We do see it as the missing link in south-east Melbourne's waste management infrastructure.

An EFW sector will support and complement the emerging recycling industry by providing a higher order alternative to landfill. In the waste hierarchy the recovery of energy has already been established as being preferred above landfill as a waste management method. With population growth Victoria's annual waste generation is projected to approach 20 million tonnes by 2046, which is an increase of 57 per cent on 2015–16 figures. There will be no major landfill capacity in south-east Melbourne as soon as 2025.

Looking at the complementarity with recycling, the top 10 European countries with less than 10 per cent of municipal waste going to landfill actually have large waste-to-energy and also large recycling sectors. Germany is the EU benchmark for recycling, with 68 per cent of its municipal waste stream recycled or composted. At the same time it has Europe's largest energy-from-waste network, with 96 waste-to-energy plants thermally treating 31 per cent of its total municipal waste volume. That really demonstrates in our view that energy from waste and recycling are complementary processes.

The unique project attributes of our initiative are: environmental best practice; we do have strong community engagement and support within our local community; we provide a suitable site with appropriate zoning and community buffers; and we are working with credible developers, investors and operators. We also offer the high-efficiency combined heat and power offtakes. Our facility would run at 58 per cent efficiency for combined heat and power versus only 27 per cent efficiency if we were using the facility to just generate standalone electricity. We would provide long-term energy offtake security for the operator of the plant and access to rail and road, as discussed.

On remaining hurdles, we are focused on taking this important regional investment for the Latrobe Valley to the development stage right now. Now we are looking to secure long-term waste supply contracts and then appoint construction contractors.

In terms of policy settings I just have a few more brief points to make. We believe that the Victorian government should develop policy settings supporting investment in EFW facilities in Victoria, with offtake agreements driving high-efficiency CHP energy generation, including the urgent aggregation of municipal waste tenders to support projects with sufficient scale; landfill levy harmonisation with other states, with announced time lines for investment certainty; nil or low landfill levies for inert or thermally treated waste ash, similar to the UK, to promote EFW infrastructure investment; recognition that heat energy from EFW is partly renewable and should be factored into the government's renewable energy action plan; and mandated government procurement of Australian-made products with a high proportion of recycled content to also support the development and growth of Victoria's recycling industry.

In summary, the AP-Suez proposed project will provide a waste management solution for 100 per cent of Gippsland's municipal and C&I waste and around one-third of the municipal household waste produced in Melbourne that is currently being sent to landfill. It would also help secure Australian Paper's operation as a major regional employer and provide the missing link in south-east Melbourne's waste management infrastructure.

Given the construction time lines involved in a project of this size, which are up to four years, unless waste supply contracts are completed by mid-2020 it is very unlikely any alternative would be fully operational prior to the closure of the last significant putrescible landfill in south-east Melbourne.

The CHAIR: Thank you. I will kick off with the first question. Actually I will ask one question that will have a number of questions attached to it. You did mention something about contracts where you would be able to get the feed from councils. What sort of assistance would you be seeking in that regard? The second part of my question is: can you take us through the environmental CO_2 emissions—for example, what standard you will be using and what impact that will have on the health and wellbeing of the community and the environment? Are you able to address this one, because I think you did say something about not using any recyclable products—say, the yellow bin or whatever bin we use. So if you are able to address these points, that would be great.

Mr DUNN: Okay. So if we deal with the MWRRG and corresponding Gippsland processes first, I think the assistance that we are seeking from government is to just help us to move those processes forward as quickly as possible and also to assist the MWRRG and the GWRRG bodies to aggregate the waste appropriately so that we can take transport to the mill forward much more efficiently. That would enable us, if the waste was appropriately aggregated, we believe, to utilise rail, for instance, more than road for some of the large volumes of waste. So any support that the government can provide on those fronts would be great.

In terms of the waste streams, yes, you are right, we are not looking to take any waste from the recycling bins, the household recycling bins; we are looking to take residual waste from the municipal solid waste stream. So that is the bin that has general garbage put into it. And then we would be incinerating that waste to liberate energy and heat—heat energy—to run our plant. In terms of the emissions controls, up to half of the investment in this facility would be in emissions control technology.

The IED guidelines in Europe are very stringent, and as a result this technology in Europe is very much seen as a low-emissions technology despite the inherent variability of the municipal solid waste stream. The plants really are designed to cope with that.

And so in terms of emissions, for instance, that issue has been an important focus for our study, because we are part of the community. We have 850 community members working at our mill daily, so that was an important focus, and we recognise it was of importance to the community, of course.

EFW is recognised as a proven and reliable technology, and so the proposed plant at Maryvale would be subject to stringent air quality and emissions regulations. The EPA is seeking to apply the IED emissions regulations in Victoria—in the Victorian jurisdiction.

The EPA works approval process which we undertook, which lasted around six months, did have a positive conclusion in late November, although that is subject to a VCAT process at the moment. That EPA analysis did include a full evaluation of the project's ability to meet stringent emissions standards. We also voluntarily commissioned an independent health impact assessment, and that confirmed that the health impacts of the facility would be negligible.

Mr HAYES: First of all, what does EFW stand for?

Mr DUNN: Energy from waste. It is often called waste to energy in Europe.

Mr HAYES: Energy from waste. I just wanted to ask: this type of technology that you are talking about—is this pyrolysis, or is this in fact high-temperature burning?

Mr DUNN: Yes, it is incineration or high-temperature burning. That is the process that we are looking at.

Mr HAYES: There is a difference? Pyrolysis—

Mr DUNN: There is a difference.

Mr HAYES: Could you explain the difference?

Mr McLEAN: The technology we are looking at using matches the majority of the installed capacity in Europe, which is moving grate incineration. Pyrolysis is a different process. It is still combustion in a sense, but it does not fully combust the product. It actually creates a fuel—like a gas—for later combustion. The moving

grate technology we are using is more reliable and proven. Pyrolysis has not had the same level of proven installed capacity.

Mr HAYES: Pyrolysis—you do not get so much toxic gases released, though, do you?

Mr McLEAN: I am actually not sure. Actually I do not know the difference in emissions between the two.

Mr HAYES: Something that I have heard anyway.

Mr McLEAN: The fact that this technology is unproven at large scale has ruled it out for our operation pretty quickly.

Mr HAYES: Right; okay. That is all at the moment. Thank you.

Mr LIMBRICK: We heard this morning from WorkSafe that actually one of the major causes of the stockpiling that we have seen around Melbourne of liquid hazardous waste was that there was a waste-to-energy conversion plant that was the main consumer of that waste in Melbourne that could not handle the capacity. I was just wondering: what sort of feed stocks can your proposed plan actually handle? Is it only household waste, or can it handle other types of waste as well?

Mr DUNN: Our plant is designed for municipal solid waste and commercial and industrial waste, which is waste from businesses, shopping centres and the like. They are a very similar type of waste. We are not looking to introduce any other waste streams into our facility than those.

Mr LIMBRICK: And the second question: what is the power capacity of this proposed plant?

Mr DUNN: It is a 225 thermal megawatt facility. Because of the reduced efficiency, if we were to produce electricity alone it would be around 27 per cent versus an efficiency of 58 per cent for combined heat and power.

Mr LIMBRICK: By using the heat and the electricity?

Mr DUNN: Yes. We need heat energy because the natural gas we bring into Maryvale is around 40 per cent of our current energy mix. We burn that natural gas to generate heat. If we can take the heat straight from an energy-from-waste facility, that means that we can save significantly on the amount of natural gas that we would be utilising. We think that is an advantage for Maryvale in terms of stabilising our costs, but it is also an advantage for the broader energy market in Victoria.

Mr LIMBRICK: Thank you.

Ms CROZIER: Thank you, gentlemen, both for being before us this afternoon and for your evidence. I am presuming we are using a lot of your product here.

Mr DUNN: We would hope so, yes.

Ms CROZIER: So I was just wondering, in terms of just how much you do contribute to the local market, if you were not viable or were not in the Victorian market, where would the paper that we are using today—this is my first question—come from? My second question is around the closure of the south-east landfill, which you mentioned was only five and a half years away, with no alternative. I think, Mr Dunn, you mentioned the Victorian government's action energy plan and that you are not a part of that, and I am just wondering: why not?

Mr DUNN: Yes, okay. So if we look at the source, we actually make a broad variety of papers at Maryvale. Probably 55 to 60 per cent of our mix would be packaging, and we see that as a very strong growth market. So that is the inside and outside walls of cardboard boxes, bag and sack papers and the like. Around one-third of our production would be office paper. If we were not operating, then that paper would come from a variety of markets, probably mostly from the Asian region, I would imagine. We are very committed to optimising the amount of recycled waste feedstock that we can utilise with our office papers. We currently recycle just over 60 000 tonnes of white waste per annum, mostly shredded office waste. That is a good value-added feedstock for us. However, we would always benefit from more demand for 100 per cent recycled paper. We find that many consumers are mostly willing to use price as the arbiter when they choose paper.

In terms of the Hallam closure, yes, that is looming in 2025. We do believe that the energy-from-waste facility is a natural fit because we need about that amount of waste from south-east Melbourne for our facility, and plan to transport it a little bit further east and then deal with it appropriately at Maryvale to help stabilise our energy costs. I don't know if you wanted to add anything, Ben? Does that answer your question?

Ms CROZIER: It does. I think you mentioned the government's energy action plan—

Mr DUNN: Yes.

Ms CROZIER: So in relation to both of those issues looming, why isn't this part of a mix?

Mr DUNN: So I think with the energy action plan we were particularly talking about the sustainable energy component of energy from waste.

Ms CROZIER: Of Maryvale, yes.

Mr DUNN: So certainly sustainable energy generation has been a part of our mix for many, many years because it is intrinsically linked to our pulping process. What a lot of people do not understand quite so readily is that around 50 per cent of municipal solid waste streams at the moment are organics, and that is regarded by the federal government as being a form of renewable energy. We would believe in future—and we have been modelling this because this facility would have a 25-year minimum life—that FOGO would impact on that into the future, and we think that is appropriate. We think that any future additional recycling from the MSW waste stream is a good thing, and so we have modelled a range of things—e-waste as well and some other streams that we would see potentially coming out at one point. But certainly I think that the renewable energy aspect of energy from waste is not understood very well.

Ms TERPSTRA: Just in terms of the proposal for the waste-to-energy facility, if that proposal was ultimately successful, what impact would that facility have on the long-term viability of the paper mill, for example?

Mr DUNN: It would have a very positive impact. In the last two years we have had around $15 million of cost added to our operation from gas pricing alone, and we have had another high-cost impost this year for imported electricity. So it is a very real problem that we are not looking to deal with in future; we are dealing with it right now. We have been committed to reducing costs in a whole range of areas at our operation, really for decades. But this is a new challenge because the cost uplifts are so sharp and immediate. We believe that this facility is required to stabilise our future energy mix, and by extension our future.

Mr McLEAN: Can I also say that it is all about providing certainty for the business case relating to our manufacturing in Victoria for the long term. An investment in upgrading a paper machine is normally in the order of hundreds of millions of dollars, and in fact our recycling facility, our de-inking plant, was in the order of $100 million. Investments of that nature need a 20 or 30-year view that the business case is going to be quite secure. With the energy markets the way they are, we do not have that certainty at the moment.

Ms TERPSTRA: I know when I came into office one of the things that I really looked at quite closely was paper products that were available on the market. I think your organisation or company was one of the ones that provided a high quantity of recycled paper and paper that was locally made. I just want to say that was really good.

Mr DUNN: Great.

Ms TERPSTRA: But it was quite a task to look across a range of products when we did eventually settle on that product, so we do pay a bit extra because we know we are supporting local jobs as well.

Mr DUNN: Thank you.

Ms TERPSTRA: Just also, you talk about needing investment to be able to, I guess, adjust to challenges in the market. You may be aware of the government's Sustainability Fund and also the Resource Recovery Infrastructure Fund. Is that something that you have accessed in the past in another iteration of it, and would you perhaps access that in the future to assist with some of the challenges that you are facing?

Mr DUNN: We have been fortunate in that we benefited from direct government investment in the feasibility study that we have just undertaken from energy from waste. So we had $2.5 million funding from the Victorian government and $2.5 million in funding, which we matched, from the Australian government. Regarding the Sustainability Fund though, Ben, I do not believe that we have directly accessed that funding?

Mr McLEAN: No.

Mr DUNN: At our recent mill shut we spent $51 million on a range of key strategic infrastructure projects at Maryvale over around a 26-day period, so we are continuing to invest. Certainly we are always willing to move forward with government wherever we can, where there is aligned interest.

Ms TERPSTRA: So it is something you would consider?

Mr DUNN: Yes, definitely.

Dr RATNAM: Thank you very much for presenting to us today. You outlined earlier in your presentation that you would need over 600 000 tonnes of waste—the vast majority of that is municipal waste—for this proposal to essentially burn our waste, to be feasible. Essentially you are looking to lock in councils to supply those higher levels of waste. So if the project hopes of locking in councils to supply these high levels of waste were 25-year contracts, doesn't this give cash-strapped councils an incentive to not improve recycling and not collect their food waste for composting in order to meet their contractual obligations for 25-plus years and avoid financial penalties?

Mr DUNN: I think that the experience from Europe has been that as long as landfill or waste for landfill is reducing, then the rate of recycling and the rate of energy from waste can move forward together. We do believe that they are structurally complementary activities. So no, we do not think that it would provide that sort of incentive. We do think that anything that the government can do to encourage increased recycling of household waste is something that we would support, and we think that, yes, there is clearly a lot of progress that can be made in that area.

Dr RATNAM: Thank you very much. As you indicated previously as well—and this is outlined in the appendices of your feasibility study—if a combination of three things happened, as outlined in this study, the incinerator would not have enough waste. So these are some of the concerns that were flagged in that study. Those three things were the introduction of increased organic collection, a ban on e-waste to landfill and new infrastructure for recycling—all things we can reasonably hope to expect to occur over the next few years if we are going to reduce the amount of waste that we are producing, waste that is going to landfill, and mitigate the crisis that we have seen, creating a circular economy. So once these reforms become operational, won't Australian Paper have an incentive to encourage the burning of recyclables and compostables to meet contracts? How can you guarantee that it will not ultimately end up burning recyclables and compostables?

I want to provide an example here, another international example, from the United States. Wheelabrator, the owner of a waste incinerator plant in Baltimore, is now suing the Baltimore County government, saying it reneged on a contractual agreement to send an annual minimum amount of trash to the facility. Wheelabrator is asking for damages to exceed $32 million. In the likely case that we continue to improve our waste management and reduce our generation of residual waste in Victoria, especially over the 25 to 30-year lifetime of the incinerator, can we expect your company to sue councils that fail to meet their waste obligations for your incinerator, or would you rule that out?

Mr DUNN: We have actually spent close to two years on our feasibility study, and that included extensive future waste modelling. We know that the facility at the moment would require around 36 per cent of Melbourne's current MSW and C&I streams that are not going to landfill, so there is a significant amount that will continue to go to landfill. The modelling has indicated that if FOGO and e-waste and other, we believe, quite sensible areas are adopted, it would flatten the curve a little, but really the key driver here is population growth. Victoria is a successful economy. Melbourne is a great, livable city, and so population growth is going to certainly drive increased waste growth. We are not relying on that population growth to provide sufficient feedstock for our facility, because there is plenty of waste available right now. We are looking just to take the position that is currently occupied by the Hallam facility. Ben, would you like to add anything to that?

Mr McLEAN: New forecasts are always coming out and population is forecast to be increasing but, as Craig said, there are 550 000 tonnes going into the Hallam facility right now. We are looking at only taking waste that goes to landfill and not the product that goes into recycling.

Mr DUNN: So then, just with your second point around contracts, we are quite a way from signing solid contracts with councils. That is a process that we are sort of working through the MWRRG process on—and the corresponding Gippsland process—but we believe certainly that there is going to need to be flexibility in those supply arrangements. Exactly what form that takes we cannot really say, but certainly there will be flexibility. And as I have said, the significant modelling that we have undertaken indicates that the changing nature of the MSW stream in Melbourne will not impact on the availability of residual waste significantly. Certainly in Germany the EfW sector has really been quite large since around 2000, and they have constantly been working in Germany to take food and all sorts of other waste streams out, and the MSW process is inherently flexible and just copes with that quite well.

Dr RATNAM: Can I also ask: will you rule out native forest wood or native forest waste, as well as plantation wood and waste, being incinerated in this facility over its lifetime? Will you categorically rule that out?

Mr DUNN: Certainly, we can rule that that. Yes, definitely. That is not a part of our mix.

Dr RATNAM: Okay. Thank you.

Mr MEDDICK: Thank you, gentlemen, both, for appearing this afternoon and for your submissions here today. I have some relatively simple questions here. Has your company any such plans for similar facilities anywhere else in Victoria at present—for instance, the northern regions of Victoria and the western regions of Victoria? And have you undertaken any preliminary investigations of suitable sites? Because the situation that we have with the landfill that you were talking about in Hallam, it is not unique to that particular area, so have you undertaken any preliminary investigations or discussions in any of these other areas in Victoria—regional areas? And I may have missed it, but what is the actual operational lifetime of the facility?

Mr DUNN: Okay. So if we answer the first question: firstly, no. We are not looking to open up any other facilities. We have a specific operational issue at Maryvale around our energy future, so we are looking to match the scale of the facility to our energy requirements at Maryvale to relieve our gas situation. That said, I think that looking at the broader waste management landscape in Victoria, we would believe with Suez that we would have a position that there is room for more than one facility. And as you say, maybe north and west could be potential areas, but that is something that is completely outside the remit of our project. And the second question—I am just trying to remember—

Mr MEDDICK: Operational lifetime.

Mr DUNN: The operational lifetime is 25 years.

Ms TAYLOR: Just with regard to the residual waste, so just a few questions around that: what is in the residual waste? I was thinking—and I am probably not a standard consumer, because I am pretty picky—that once I have put the stuff in FOGO and the worm cafe and I have taken the soft plastics to Woolworths, all that is left really is recycled kitty litter, because I do not want to put that on the garden. As I said, I am not standard, and there are probably a whole lot of other people putting a whole lot of stuff in there, but if you take out the FOGO and that, what is left? And then also, the incinerated waste: what do you do with that? How toxic is that? Because there will be something left over after you burn, so where does that go? And what other renewable offsets have you looked at, like solar and so forth, for your plant—if you generate enough waste in certain ways, or even composting and other things? I just want to know what you have explored.

Mr DUNN: Maybe if we deal with that question first.

Ms TAYLOR: Sorry, there was a lot in there.

Mr DUNN: That is okay. The issue of solar is something that was raised a lot by different groups within the community—'Why don't you just put solar panels in?'. But the reality of our energy profile is that we need thermal energy. Imported electricity is only around 5 per cent of our mix and we also need baseload energy. We

are running our operation 24/7, 365 days a year, with the exception of some mandated maintenance shuts, so, yes, we do need baseload energy. That is one of the reasons we have really naturally gravitated to EFW technology.

Going back to your first question around what is left, it is everything, obviously, that does not go into the green waste bin and into the recycling bin. Unfortunately many people seem to have a larger waste footprint than you do, so I congratulate you on that, on your efforts. I know my kids are getting into the soft plastics recycling at the moment. It is all good from our perspective. But, as I said, we are looking to utilise certainly less than 40 per cent of Melbourne's current residual waste. There are significant volumes of waste that do not make it into the value-added waste streams, so that is the residual waste that we are looking to target. There was another question in the middle?

Ms TAYLOR: The incinerated stuff.

Mr DUNN: Yes, the bottom ash. So the natural output from a high temperature incineration process is incinerated bottom ash. Around 20 to 25 per cent of the waste by weight would become ash. It is about 10 per cent by volume. In many countries in Europe the incinerated bottom ash is actually a really natural replacement for aggregate—quarried material, sand and gravel and the like. We would be looking to try to fast-track an approvals process with our partner SUEZ to utilise and re-use that material for road base. We have a strong infrastructure-building government at the moment. We would look forward to some support from the Victorian government. The sort of volume we are talking about may be 120 000 tonnes or so. I think it would be less than 1 per cent of the aggregate that is annually used in Victoria, so I am sure that we can find a good market for this material.

There is a much smaller component of the outputs from an energy-from-waste plant. They are the air pollution control residues, or what is colloquially called fly-ash. A lot of the volume of that is the activated carbon and lime and so forth that is used to trap and bind the toxic materials so they are not emitted but they are captured and then appropriately put into a controlled landfill or a prescribed landfill. So that is what we would be doing with that particular material.

Mr McLEAN: There are also the metals too, the metals that are recovered from the process. Typically things like eyelets in an old pair of shoes and things like that, are essentially separated from the combustible product, so the metals and the aggregate, the inert products or the non-combustible products, are the outputs. The energy value from the combustibles is taken with high efficiency, and the metals and the aggregate get recycled. So this would take it down to around 3 per cent of its previous landfill volume.

The CHAIR: Before I move to Mr Hayes, just a quick one: what does this facility, in comparison to landfill, cost? What is a typical landfill costing today versus your operation?

Mr DUNN: In terms of establishment?

The CHAIR: And running cost? I think running cost would probably be a better way to compare it going forward.

Mr DUNN: Okay. I am not sure that we are able to specifically answer that.

The CHAIR: Do you want to take that on notice? I am happy for you to take it on notice and get back to us.

Mr DUNN: Yes, we might take that one on notice. I would say, though, that we believe that as long as landfill levy harmonisation occurred, that would be sufficient for this energy-from-waste facility—at the scale that we are looking to build it—to be very competitive with landfill.

The CHAIR: Are you saying across the state? I have got a very good idea of what you are talking about, but for the benefit of the committee—

Mr DUNN: No, with regard to other states, nationally.

The CHAIR: are you talking about with other states or within Victoria?

Mr DUNN: No, other states. So if the landfill levy was increased, for instance, to match New South Wales, it would be a very competitive option. We believe that that is something that is desirable anyway, because we do not want to have these perverse outcomes where waste is being transported interstate, as we saw from the New South Wales to Queensland example. Hence Queensland increased their levies. To have some sort of harmonisation, we think, is a practical, pragmatic sort of solution to that issue as well.

Mr HAYES: That would provide sufficient funding to subsidise the operation from that plant?

Mr DUNN: At the moment we are looking at the cost associated with landfill in Victoria, which is quite low in comparison to New South Wales or South Australia. This is an incentive for landfill to continue as the mainstay of Victoria's waste management system. We believe that that does need to be challenged, and we think that the harmonisation of landfill levies would assist in that process.

Mr HAYES: I just want to ask a couple of questions in regard to some correspondence I have received. What is the difference between selective catalytic reaction and selective non-catalytic reaction? There are two different methods here quoted.

Mr McLEAN: We will have to take that one on notice.

Mr DUNN: Yes, can we take that one on notice?

Mr HAYES: You can have that on notice definitely, yes. And what temperature are you operating at?

Mr DUNN: That is a good question. It would operate at a minimum—it would have to reach a minimum—of 850 degrees Celsius for a specified period of time under the IED regulations to ensure that dioxins are not an issue with the plant. Practically speaking, a lot of energy-from-waste plants are operating at between the 1000 to 1100 degrees Celsius sort of band in Europe.

Mr HAYES: I have got here that you need 1000 to 1200 degrees Celsius to properly combust dioxins, but you say that is not necessary?

Mr DUNN: Yes, it is 850, according to the European regulations, but as I have said, the facilities that we have visited tend to operate well beyond that level.

Mr DAVIS: Just a very quick question. You were mentioning moving the residual waste down to your plant. Truck or train? How would you do that in the model?

Mr McLEAN: We plan to use both. We already run a train—a regional freight train—from the mill to the port, because we are the largest port exporter. So we would look to use that train to essentially take waste back from the inner suburbs. We have looked extensively in the situation in Hallam, and we think trucks are the best option there because essentially there is no access to a rail and a rail facility in an area.

Mr DAVIS: So you think there is capacity for improvement in your proposed model if there was such a transfer?

Mr DUNN: If there was, yes, but our study reveals that it would not justify us investing alone in an inner rail facility.

Mr DAVIS: And are there are restrictions in terms of the capacity to move those rail movements that may be required?

Mr McLEAN: We do not believe so.

Mr DAVIS: Competition with passenger—

Mr McLEAN: Certainly this side of Dandenong I believe that is the case. I am certainly having discussions with Freight Victoria and—

Mr DAVIS: The Caulfield–Dandenong corridor and the Caulfield–city corridor.

Mr McLEAN: That is right. It has only two train lines on that track and we have been assured our regional freight train will not be affected.

Mr DAVIS: There used to be more passing loops.

Mr McLEAN: We have requested a meeting with the Gippsland line upgrade team to understand the impact during the construction and after that.

Mr DAVIS: We would certainly appreciate any comment that you may have in terms of what infrastructure would be relevant to underpinning your model in terms of rail.

Mr McLEAN: We have approached Freight Victoria a couple of times to understand what the plan might be for the port shuttle operation—an intermodal facility in the south-east to enable the port facility to transport containers to the south-east, because we saw that as an opportunity to piggyback a facility for waste transfer. We have suggested that idea to Freight Victoria.

Mr DAVIS: Again, anything you may want to put in your more general submission on that would be welcome.

Mr DUNN: We will certainly ensure that we do so, thank you.

Dr RATNAM: I just want to come back to a previous question I asked about. Potentially, for example, should residual waste levels drop and there is demand to keep up with the amount of energy needed for the incineration plants to keep working, will you rule out burning recyclables should you not have enough residual waste?

Mr DUNN: It is not going to be an issue for us. We are committed to MSW and C&I waste streams for this plant. We are not looking to take the recyclables into the plant. We know that, as I said, we would be taking around one-third of the current residual waste. We have modelled that FOGO and other initiatives would come into force during the 25-year waste contract period and we are committed to flexible contractual arrangements to make sure that councils are happy and we are happy. If we do not offer attractive terms, we are not going to get access to the waste in any case.

Dr RATNAM: One of the reasons that I ask that is because there is a broad section of the community that wants to reduce the amount of waste that we generate, hopefully down to 100 per cent of waste not going to landfill—that we are recycling it and we are re-using it and we are promoting our industries here. And there is a broad consensus in this community and support for that, and I think many Victorians would be aghast at the idea that we are going to start burning our waste. So I think that is why this requires a lot of interrogation.

I note that you have not specified categorically ruling it out, but I propose that that is something that the committee will need reassurance of, because there are in some ways, like you recognised before, some perverse incentives or outcomes that could result from this. For example, the landfill levy was a mechanism designed to be a disincentive to sending waste to landfill, because it costs money to send waste to landfill. If they are going to make money by sending your waste to be burnt, you do not have that incentive anymore, so it flies totally contrary to decades of policy in this state. So that is why I think it requires lots of attention.

I note that in the works approval for your proposal for the Maryville incinerator there is a condition that requires the facility to provide improved material recovery, so you want to be able to get more of the recyclables out of the waste that you might be collecting. So if this becomes viable, what would this mean? How will you remove clearly recyclable material from the waste that you are receiving at your facility, and how will you fulfil this condition given that it is in your works approval?

Mr DUNN: So, if we go back to that earlier issue first, there is the concept of calorific value, which I am sure you are familiar with, for energy-from-waste plants. Our facility is designed, or would be designed, around a municipal solid waste and C&I mix. Typically that is a much lower calorific value than recyclables. Refuse-derived fuel plants like cement kilns and the like, in Germany for instance, commonly use a much higher calorific value. Let us say it is 16 or 17, and it is around nine to 11 for an energy-from-waste plant.

So our facility is actually completely designed around the physical characteristics of the MSW and C&I waste streams. It would require a very different commercial model to actually be viable from a recyclables perspective.

Looking at the improved material recovery, certainly we will be working constructively when, we hope, we gain all of the appropriate approvals for the facility to fulfil all of the requirements from the EPA, and I am not sure that I can say too much more specifically about that.

Dr RATNAM: Thank you very much for that response. Some of the information available at the moment indicates that they will conduct a visual assessment to identify what could be recyclable and needs to be moved away from the stream that is going to be incinerated. Is that the method you are going to use? Or are there other methods that you are going to use to make sure that you recover as much recyclable material from the waste that you collect?

Mr DUNN: I think the key method is household source separation. We would certainly be in favour of any education support that the government can provide to ensure that we have better quality household source separation so that appropriate recyclables and valuable recyclables are put into the recycling bin and do not find their way into the MSW waste stream. That is really what we are thinking about, specifically around that improved material recovery. We would certainly support and get involved with community education schemes to make sure that we get the appropriate quality of material going into the recycling stream and then we get the right materials into the MSW stream.

Dr RATNAM: Just one last question: are you seeking any government funding for this proposal—for the plant or its ongoing operations directly or indirectly?

Mr DUNN: At this point we are looking to secure funding from the private sector. If the state or the Australian governments wanted to be involved, of course we will certainly look at that, but we know that this proposal is commercially credible. So we are looking at private sector investment at this time.

Mr LIMBRICK: Just one short question: doesn't this process actually increase the amount of recyclable material recovered? Like materials at the moment that are going into landfill, so metals and things like that, you are going to be recovering those that would not be recovered now?

Mr DUNN: Yes, that is quite true. That is exactly right. With glass and all sorts of mineral-related materials, that would come out of the bottom ash process. There would be appropriate mining of ferrous and non-ferrous metals, which are modeled to be around 3 to 5 per cent of the recycling stream from the plant. Then we would be hoping to take the bottom ash up to a recycling or even a re-use category on the waste hierarchy by replacing natural aggregate, and natural aggregate is a non-renewable product. So we think that there are some real advantages in appropriate utilisation of the by-products from the energy-from-waste process.

Mr McLEAN: The European example is that the blend of recycling facilities and energy-for-waste maximises the recycling in an economic way. Certainly you can source separate, and then via the MRFs you can put them into the streams, but as you know, you need the market for the recycled product. So in order for that to operate, the cost of that supply chain needs to be effective. Putting too much energy or machinery or investment into the source separation adds a considerable amount of cost, and when you do not have a market for the product, then the business model does not work. So the appropriate blend of investment in recycling facilities and energy-for-waste allows you to recycle to the highest level at the most economic cost, and that blend, that mix, is what we have looked to in Europe and their 20 years of experience to see where that has landed essentially. That is why we have come back to the source separation at households. Money spent on education for the community is better than money spent on machinery to do essentially the same thing.

Dr RATNAM: Can I just clarify that? So you are saying on source separation that you will need to get as pure a source of the materials possible when it gets to you, but you are not doing the separating once it gets to you. Is that it? You are saying at the—

Mr McLEAN: That is right. It is the contents from the red lid bin that would come directly to the EFW facility.

Dr RATNAM: That is right. But once it comes to you, you are not doing the sorting. You will not be taking out recyclables should they be in that stream—although I thought in the works approval you are required to increase the amount that you recover?

Mr DUNN: So what Ben is confirming is there is no presorting of waste that is part of our proposal. We are really looking for that to take place at the household level. The waste contracts that we sign with councils have quality parameters around them, and so we would be looking to inspect waste, ensure that our waste supply chain is living up to those contractual obligations. But in terms of—

Mr McLEAN: In terms of mechanical investment, there is no mechanical investment.

The CHAIR: But basically what I understand is what is going to landfill today, that is basically what you are after—

Mr DUNN: That is right.

The CHAIR: Particularly in the south-eastern suburbs and that part of the world, as the current landfill permit or licence is due to run out in 2025—and that is why I wish you well and I hope you succeed, because I do not want that to finish in my electorate of Ravenhall.

Mr DUNN: Which is where it is going to go; it will likely all be taken across city.

The CHAIR: I declare that conflict of interest already. So that is why I wish you well. But that is basically what you are focusing on. Then going back to the 4.2 million tonnes which currently goes to landfill, and hopefully the intention is to reduce that, but then with population growth, that might offset that. So there will be plenty of material going to landfill into the future that could finish up in an operation like yours.

Mr McLEAN: Yes, that is right.

The CHAIR: Is that a fair assessment?

Mr DUNN: I think so. We see that we could be the first of a few facilities, and we could drive the creation of a new waste management sector for Victoria, as has happened in other European jurisdictions.

The CHAIR: Okay. On that note, thank you very much for your time. Mr Davis made some comments about some stuff you might be providing us, and the secretariat will be in touch with you with the list of questions. Have you put in your submission yet?

Mr DUNN: We will. Yes, we are working on it at the moment.

The CHAIR: I appreciate that; it would be great. The deadline has now moved until the end of May, so you have got a bit of time.

Mr DUNN: Thirty-first, yes.

The CHAIR: So thanks again.

Mr McLEAN: Thank you.

The CHAIR: And on that note, the committee adjourns to a further date to be announced.

Committee adjourned.