T R A N S C R I P T

LEGISLATIVE COUNCIL ENVIRONMENT AND PLANNING COMMITTEE

Inquiry into the Health Impacts of Air Pollution in Victoria

Melbourne—Tuesday, 29 June 2021

(via videoconference)

MEMBERS

Ms Sonja Terpstra—Chair
Mr Clifford Hayes—Deputy Chair
Dr Matthew Bach
Ms Melina Bath
Dr Catherine Cumming
Mr Stuart Grimley
Mr Andy Meddick
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Ms Georgie Crozier
Mr David Davis
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Mrs Beverley McArthur
Mr Tim Quilty

WITNESSES

Ms Eunsil Hwang, Adviser, and

Mr Ashley Stride, Deputy Chair, Australian Home Heating Association.

The CHAIR: I declare open the Legislative Council Environment and Planning Committee's public hearing for the Inquiry into the Health Impacts of Air Pollution in Victoria. Please ensure that mobile phones have been switched to silent and that background noise is minimised.

I would like to begin this hearing by respectfully acknowledging the Aboriginal peoples, the traditional custodians of the various lands we are gathered on today, and pay my respects to their ancestors, elders and families. I particularly welcome any elders or community members who are here today to impart their knowledge of this issue to the committee or who are watching the broadcast of these proceedings. I would also like to welcome any members of the public who may be watching these proceedings via the live broadcast as well.

I will just take the opportunity to introduce committee members to you. I am Sonja Terpstra. I am the Chair of the Environment and Planning Committee. Also appearing with me today are Dr Samantha Ratnam, Ms Melina Bath and Dr Catherine Cumming.

All evidence that is taken today is protected by parliamentary privilege as provided by the *Constitution Act 1975* and further subject to the provisions of the Legislative Council standing orders. Therefore the information you provide during the hearing is protected by law. You are protected against any action for what you say during this hearing, but if you go elsewhere and repeat the same things, those comments may not be protected by this privilege. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament.

All evidence is being recorded, and you will be provided with a proof version of the transcript following the hearing. Transcripts will ultimately be made public and posted on the committee's website.

If I could please get you both now to state your names and the organisation you are appearing on behalf of. Ashley, we might start with you.

Mr STRIDE: My name is Ashley Stride. I am now the Deputy Chair of the Australian Home Heating Association.

Ms HWANG: My name is Eunsil Hwang, Adviser for the Australian Home Heating Association.

The CHAIR: Okay. Great. Thanks so much for that. All right, Ashley and Eunsil, we will hand over to you now. Ten minutes for your opening remarks, if you could, and I will give you a bit of warning as we get towards the 10-minute mark. That way it will provide plenty of opportunity for committee members to ask questions of you. Thanks, and over to you.

Mr STRIDE: No problem at all. Certainly thank you for the opportunity to be able to present on behalf of the home heating association today. The Australian Home Heating Association is the organisation which represents manufacturers, importers and retailers for solid-fuel appliances within Australia and obviously here in Victoria as well. As an organisation we are certainly very pro when it comes to reducing wood-smoke emissions and particulate, and we do that in a multifactorial way towards what we do as an industry but also too for the relevant people that are using the products that we sell and manufacture in the marketplace.

Since 1991 we have actually been a sitting member of the Standards Australia board. Standards Australia is what writes the legislation for the standards for wood heating in Australia and New Zealand. It is actually joint legislation between Australia and New Zealand, being the 4012 and 4013 Australian standards. Since that time we have actually developed and lowered the emissions which are required to the point that we are at at the moment: 1.5 grams and a minimum efficiency of 60 per cent. If we wind back to 1991, we were at 5 grams per kilo of wood that was required and no efficiency rating. We have progressively changed that over time to be able to be where we are today. The current standard that we are at now actually came into place in 2018, which is the 1.5 grams and 60 per cent efficiency.

Efficiency and particulate work particularly go hand in hand together. If you are looking at emissions, it is obviously important because that is what you see coming out of the flue pipes—so that is your particulate or 2.5 particle matter coming out of the flue pipe—but efficiency is also important because that is the amount of fuel that is being put into the fireplace. We want to see two things happen when we work on technology and building fireplace products to be able to suit a marketplace: we want to see less fuel being burnt and less emissions coming into it. Where we are at right now compared to other parts of the world would be a world-class, leading standard compared to other relevant standards in the world—so the EPA 2020, which is the US legislation in regard to wood-smoke emissions, and the eco-design one, which is the EU standard when it comes to that. And as an importer myself, I know that when we bring in product from either Europe or from America we have to undertake further testing again and modification to the product to be able to make it meet our more stringent standards.

A lot of it does dial back to the wood that we do burn in Australia. It is a lot more dense than in other parts of the world, so having the ratings that we do and to be able to get fireplaces compliant to that is extremely important obviously for us as manufacturers. And how we have developed that as manufacturers is a lot of technology change between what you would have bought 40 years ago in Victoria—we always refer to it as the Coonara—basically versus what we have now. We have gone from just a metal box with a baffle in it which slow combusts to introducing tertiary and secondary burners to the fireplace. Tertiaries and secondaries are very important when it comes to reducing those emissions, because we want to burn two to three times inside that fireplace and get that particulate matter right down inside there. So we have got tertiary and secondary. We are also using ceramic baffles inside units now these days as well.

When you look at technology when it comes to the burning of solid fuel, we can compare it to an automotive industry. A car which was built 40 years ago versus a car which is built today are very different beasts, and it kind of gets to the point where you talk about it in regard to wood-smoke problems and any problem areas. So outside of Victoria we look at places like Launceston and the Armadale council and things like that, and our proactive approach to that would be that the best thing that someone can do if they want to continue burning wood is to actually remove older product and insert newer product into that field which is more effective in regard to it being friendly to the environment with less particulate and also using less wood at the same time.

We certainly, as an organisation, also acknowledge the fact that a lot of what comes with the operation of the unit does come down to the homeowners themselves, though as an organisation we certainly do take proactive steps to be able to ensure that we are teaching best practices to people that have the products—so how to use the product correctly, how to source the correct wood, how to burn a fireplace correctly and start a fireplace correctly. We do that. Over the past few years we have invested a fair amount in videos online, so via our YouTube channel and on our website, to be able to educate. One thing that we have found with those videos that really helps us work hand in hand with a lot of councils around Victoria, especially in regional areas where they do have problems with smoke issues, is that we can use those videos and those councils can use them as a tool to be able to educate people to operate a fireplace correctly.

We have also, in that, worked with the Environmental Health Professionals Australia as well. That is basically a group of most of the environmental officers for regional councils that work together as a group. We have certainly presented a lot to them, to the point that we have actually done a side-by-side operation of a fireplace, one with unseasoned wood versus correct operation of a fireplace, to be able to see the difference between the two. Certainly as an organisation that has a member base—at the moment in Victoria we have pretty close to around seven or eight manufacturers; around Australia, manufacturers and importers, about 40—we certainly do work together to be able to help in situations like that to educate not only councils but also too direct to the homeowners. There have certainly been a couple of places we have been to where the council cannot solve the issue, and as an organisation we are more than willing to get out there and certainly give people a hand. The last thing that we want is to be driving down the road in the countryside and seeing smoke billowing out of a flue. The correct operation with a fireplace is no smoke out of a flue at all. It should be a completely clean burning fireplace.

We certainly believe, basically, that wood heating is an imperative part of Victoria, especially in regional areas where you do not have access to electricity and natural gas. We feel that proper usage of products and also too use of a modern fireplace is certainly not only carbon-neutral but also friendly on the environment when you are actually taking sustainable firewood, which is another thing that we certainly endorse. We work hand in hand with our sister association, which is the Firewood Association of Australia, to be able to ensure that we

are promoting not only the correct usage of a fireplace, a modern fireplace with the technology, but also too correct fuel to be able to ensure that there is a good operation of the fireplace as well.

Certainly looking at that, from another perspective as well, we have had a massive amount of feedback over the past two to three weeks with the storms that have come through Melbourne and through Mount Dandenong—that wood heating and being off the grid is vitally important to some people, to the point that it is a matter of you can heat your house or you cannot heat your house. So for us we see it as vitally important and moving forward a vital option when it comes to heating inside there. We certainly will work hand in hand with the government and certainly other players within this committee to be able to ensure that we can help that have a positive role into the future.

The CHAIR: Great. Thanks so much for that, Ashley.

Mr STRIDE: No problem.

The CHAIR: We might hand over to questions now, and I might kick off perhaps with a first question.

Mr STRIDE: Sure.

The CHAIR: You are talking about standards for wood heaters. Could you explain the testing process and established standards for wood heaters and how that works?

Mr STRIDE: Yes, sure. There are two testing houses in Australia at the moment. So there is one in Morwell, which is in Victoria, which is what the majority of Victorian farm and factories use, and there is another one, Adelaide Heating Technology, which is over in Adelaide The way that you are testing for particulate matter is that every unit is basically tested with exactly the same amount of fuel, the same moisture content inside that fuel and the same size. It is all weighed, so basically you are comparing apples for apples, if you will, across the line there. The fireplace is installed into what they call a [inaudible] room, so it is a room which is completely sealed. It pretty much looks almost like a walk-in freezer, if you will, so it is completely air-sealed inside there. When the fire is burning inside that fireplace with that fuel inside there, they do three runs, so basically a high, medium and a low run, and they will do that over five times inside there. What they have got when they are doing that run, what is coming out of that flue stack, is going through a filter. What comes out of that filter is basically measured, and that is your grammage of particulate which is coming through there. You are having a high cycle, a low cycle and a medium cycle—if you are familiar with a wood heater, that would be with your air control moving in different directions to be able have it up there—and then they work out the average.

Once you have got that average worked out there, then that is what you are going to work out basically what your average particulate rating is on the fireplace, and that is where we need to meet that 1.5. To give you an example, when the first ruling came in, when we moved from 5 to 2.5, it basically wiped out half of the fireplaces on the market. They were never going to meet that standard, and it reduced the amount of fireplaces that were on the market. We see that as a good thing. We only want to move forward with the correct technology inside a product, so having that testing regime in there and moving those down from 2.5 to 1.5 now, which has further reduced it again, is moving us in the right direction.

The CHAIR: Great. Thank you. Dr Ratnam.

Dr RATNAM: Thanks very much, Chair. Thanks very much for your evidence today. We have heard through this inquiry very strong evidence based on years of collation of research data and a previous Senate inquiry that there is no safe level of air pollution and wood smoke is a really significant contributor. Despite its not widespread use—it is still used quite commonly, particularly in regional areas—it disproportionately contributes to air pollution. I think the Senate inquiry found that for New South Wales particulate air pollution for Sydney and New South Wales towns was somewhere as high as 48 to 60 per cent of air pollution contributed. The Senate inquiry found that. We also heard evidence yesterday talking about what the industry has tried to do in an effort to keep its industry alive—obviously it has got its interests up-front—wanting to change use and behaviour and improve how people use their heaters and found that actually ineffective in reducing the type of pollution that people were exposed to.

A study in Launceston of households who knew that their emissions were being measured—so they were trying to do it as carefully as possible—measured real-life emissions averaging 9.4 grams per kilogram, and this was double the ratings of the heaters. So one of the issues they have identified is that the lab testing versus the real-life emission levels are highly variable. There are huge differences between what the industry says is the lab testing result and what the heaters say are their emissions versus what happens in real life. Also, from New Zealand they hoped that requiring all heaters to have low emission standards like you have talked about, so they base it on lab tests, would reduce real-life emissions. However, when the heaters with those new ratings were operated, they said that they were averaging 0.85 grams—that is what they aspired to—but when they were tested in real life they averaged 6.4 grams, almost eight times worse than the lab test measurements. So we have the real-life measurements of emissions and air pollution being much higher than what the industry is saying. How can we trust that any of the apparent improvements the industry is saying will reduce the impact of wood smoke pollution on people are going to have any effect when we cannot believe the testing results that you rely on to make such assertions?

Mr STRIDE: Yes, sure. So the testing results are as per Australian standards by a NATA certified lab, so we do not test ourselves. We are not tested by a company. We certainly do test our product before we send it to a lab because it costs a lot of money to get things tested, but that is a NATA certification that is basically doing that lab testing for us and those results. Certainly, as I discussed in my opening statement, user operation of a fireplace does play a contributing part in regard to how that fireplace is going to operate. The majority of fireplaces that are around in the marketplace right now are fireplaces which are not meeting standard. The argument that we would have is that something which is meeting the standard right now, being 1.5 grams, can have a higher rating if it is using wet wood inside the fireplace, which is generally going to be the biggest contributor to increasing smoke emissions out of a fireplace. But by the same token, if you are using something which is 40 years old and you are using it the same way, you are going to have even double, triple, that inside there again.

For us, as we were saying, it is a two-prong attack for us. We can provide the technology and provide the product to be able to do it correctly. It is up to us also as manufacturers and as an association to be able to ensure that we are teaching people how to operate the fireplace correctly and also have that in our instruction manual on how to do it, but also too having a good, reliable source of wood which is seasoned correctly inside there.

One thing that we did as an organisation around two years ago—and one of the biggest tools that we can use as an organisation—was a moisture meter for fuel. As I mentioned before, one of the biggest contributors to a fireplace not operating within that scope of what that testing is is the fuel that has been put inside the fireplace. Your two variables when you are operating a fireplace are going to be the fuel that is put into it and then the user and how they operate the controls on the unit. One thing with a modern fireplace is those controls do not have anywhere near the effect of what they used to. You cannot shut a fireplace right down to burn overnight and smoulder overnight anymore; a modern burning fireplace simply will not do it. But getting fuel in there and ensuring that people are actually putting the right one in there—a moisture meter means that you are basically grabbing your fuel, putting an electrode into it and seeing what moisture rating is on there. As an organisation we gave away around 2500 of those about two years ago within the marketplace via councils and also as an industry, and there are certainly a lot of manufacturers, including the company I work for, that actually put that in the unit when we send it out, so it is in there as well.

Dr RATNAM: Could I follow up on that briefly actually, because we have heard this before, that the industry then shifts when you actually point out that the lab testing versus the real-life emissions are vastly different and very, very alarming because what people are exposed to is not what they have been told they will be exposed to, so they are misinformed there. We often hear the industry then shifts the blame onto individuals, saying, 'Well, you're not using it properly and that's why you're exposed to such bad air pollution'.

I just refer back to the Launceston study—this was evidence provided to us by the Australian Air Quality Group; they cited this evidence—that said:

> Despite considerable efforts to encourage owners of remaining heater in Launceston to operate them as carefully as possible, the 54% reduction in wood heaters resulted only in a 40% reduction in wood heater pollution, suggested that education on how to operate heaters to minimize pollution was largely unsuccessful.

We have had reams of evidence that you can try to teach people to use them more effectively and you can say that you are improving the efficiency standards of them, but the result is people are still being exposed to—I think one of the stats was in an evening's worth of burning 5000 cigarettes worth of smoke. So how can the industry stand by after years of evidence that suggest that is not working and that the only response to reduce the pollution that people are exposed to from wood heaters is to ban them altogether?

Mr STRIDE: It is an interesting fact—5000 cigarettes. I would like to see that study, because—

Dr RATNAM: That is from the Senate inquiry. You can refer that back to the Senate inquiry; I am happy to provide that.

Mr STRIDE: Okay. No problem at all. There have certainly been studies in the opposite direction to that as well, so Basix in New South Wales. You have got other studies in air quality around the world which would debate against that. Certainly if it is a Senate inquiry, I am not going to argue against it, but—

Dr RATNAM: It was CSIRO data cited in the Senate inquiry findings.

The CHAIR: Sorry, Dr Ratnam.

Mr STRIDE: Yes, by the same token, we also quote CSIRO figures to work in our direction as well, so there are certainly arguments both ways there. Certainly, as I said, there are inquiries that the Firewood Association of Australia have done. They have done testing and have done the same types of studies as well and have seen a reduction in smoke of the same essence of what you are saying there with the Launceston study. Launceston also did exactly the same thing when it came to doing buyback and putting in heat pumps, and basically the result was not similar to education in regard to reduction of smoke. So it can work both ways.

The CHAIR: Right. Okay we will move to Ms Bath. We will probably get a second round because we have over half an hour to go. Ms Bath, question.

Ms BATH: Thanks, Chair. Thank you very much for your presentation today. It is interesting, the contrast—we had a previous speaker say that they were calling for a banning of all wood heaters in Victoria, and now you are presenting some very interesting arguments. One thing that I think is often overlooked in that very broadscale commentary about banning heaters is that regional Victorians—if you look at the socio-economic status, many regional Victorians are not up at the top; there can be an over-proportional representation of less than wealthy regional Victorians—quite often they do not have natural gas attached to their homes so have to buy bottled gas, which is getting dearer and dearer. They have a choice sometimes between electric heating or fire, and so fire, whether it be a solid fuel heater or an open fire, is very popular in country Victoria. It just does not stack up economically for those people to, say, just move on to something else, but naturally it is very important to have the most efficient form of wood heating. We had the previous speaker speak about a government subsidy to get out of wood heating, which I find a bit mind-blowing. If you had a choice and you were talking to government—and this is a parliamentary inquiry—what would you like to see happen in terms of solid fuel heating and any incentives, disincentives or otherwise for the solid fuel heaters of the world?

Mr STRIDE: Certainly as an association we would see that the best way to do it would be to replace old product with newer product and better technology. It is difficult for us to say that as an association which is backed by manufacturers. So for us to be able to make that statement—which we are on Parliament record right now—would basically be saying that we would like to sell more fireplaces. We do not want to be seen as an organisation which is basically out there to make money by promoting the fact that we will like to replace every old burning fireplace out there with a new one. But certainly, as mentioned before, it is again not discouraging the fact that the way a fireplace is operated by the end user is going to change the results in regard to the way it is tested, but if you have a fireplace which has no efficiency and 5 grams worth of emissions versus one which is 60 per cent and 1.5, that end result, irrespective of how you operate the fireplace, will always be exceptionally better.

Ms BATH: Thank you. You have said that roughly 10 per cent of the population of Victoria—10 per cent of the households, I should say—use fire or wood-burning heaters. Do you have a proportion of what that is in the country—you know, x-per cent in regional if you look at the regional LGAs? Do you have any sort of breakdown of those stats?

Mr STRIDE: We would not, per se, as an association. As a manufacturer I can tell you what proportion we sell through metropolitan Melbourne versus into regional Victoria, and it is stacked very much into regional. So you are talking almost an 85-15 split—going in that direction there. What we sell into metropolitan Melbourne are extremely highly efficient, low-particulate fireplaces from Europe, which are more as part-time fireplaces as opposed to—

Ms BATH: An ambience rather than an actual fire.

Mr STRIDE: Yes. And we are talking ultra-low—like 0.4 of a gram or 0.3 of a gram—fireplaces going in there, because we see from our customer base that that is what they want. If they are putting a fireplace in Prahran or Coburg, they are not going to want to basically be annoying their neighbour and having a fireplace which is going to smoke. So that customer is always asking that question first, which is 'What is the grammage of this?'—is it basically a green fireplace, pretty much.

Ms BATH: Thanks. And I guess, to that point, we have had a lot of firewood—we have had a lot of trees fall down—due to the storms in Gippsland as well, which is my electorate, as in the Dandenongs, and there is a lot of fuel on the side of the road. We are certainly saying it needs to be a sensible approach to this and that when it is safe to do so it is really important that that fuel load turns into a useful source of heating. There are other forms of pelletised firewood. If you are looking at the evolution of the fireplace and the heater, what about the evolution of the heat source? Can you speak to that? Is there a sort of evolving, better presence than a great piece of redwood or a piece of stringybark et cetera?

Mr STRIDE: Yes. Certainly pellet fuel technology, we incorporate that into our association, being solid fuel. We do have a few manufacturers that manufacture that type. For those that are not familiar with what pellet fuel is: it is basically using what would normally be waste fuel—so from sawmills or truss factories and stuff like that—and basically grinding it down to almost a powder and then compressing it into pellet form, so basically the natural resins of the actual timber itself come into a pellet from. Then a pellet fireplace, per se, is basically running on forced combustion. So it is basically a fire pot which has an auger which drops the fuel into it, and you are pretty much running a controlled burning environment inside there. If you look at pellet fuel in regard to wood burning fuel, where we talk about the variable being the home owner and what they are doing, you really take away those two variables with pellet, because with pellet the fuel is regulated. But then on the same token you have no say in what you can do besides a high, medium or low switch on pellet fuel there as well.

The issue that we have in Australia in regard to the pellet fuel is the availability of fuel. So certainly in your electorate we have just actually had someone come online doing pelletised fuel down Morwell way, so that is really good for the industry itself. But until such time, it has actually been imported fuel from New Zealand, which, really, if we are talking about the environmental impacts of that—that has been put on a boat and shipped across here then road trucked. By the time we get to actually operating a fireplace, which is running on electricity and which is probably getting power from down your way as well, the environmental impact is not that great. Moving forward, what we see in North America and through Europe is that it will become the norm and the trend here in Australia, especially as fuel becomes more available, and then that starts to stack up against LPG as well in regard to usability. Your wood fireplace basically becomes fully thermostatically controlled, and being forced combustion as well, that does exceptionally well for emissions as well. So you get those emissions at 0.1 and 0.2 of a gram, which is quite down there as well.

The other really important thing to note with pellet fuel too is that the majority of pellet fuel is softwood as opposed to hardwood—they are coming from truss plants and stuff like that—so pellet wood inevitably will burn at a lot lower rate. So if we compare New Zealand to Australia, for example, we do have a joint standard but we have a different standard when it comes to the fuel that is used inside there. I can give you an example as a manufacturer ourselves. We have one fireplace which is approved for both New Zealand and Australia. In Australia it has got an efficiency rating of around 82 per cent and the particulate at around 0.9. We see exactly the same product in New Zealand is around 79 per cent efficient but it is 0.2 of a gram, just based on that different fuel rating, which is softwood versus hardwood. In Australia we do not burn softwood. We burn hardwood, whether it be through what we would recommend, which is a sustainable source. What you are seeing in Gippsland with those storms and up through Mount Dandenong—that is all going to be hardwood that is coming through there as well.

But the biggest thing for us—sorry, just to follow up on that as well—is that we have been in contact with the Firewood Association of Australia, which as I said, is our sister there, and we are actually starting a fairly large social campaign to ensure that that wood that is on the side of the road there is not just chopped up and put in people's fireplaces right now.

Ms BATH: It needs curing.

Mr STRIDE: It needs to be seasoned 12 months, and then basically it is ready to go. It is great—well, it is not great, obviously, that the storms have come through. I have got a rep that lives in Kalorama actually, so he has only just got his power back. We have that fuel available, but we need to make sure that people are doing the right thing with that fuel.

Ms BATH: Thanks, Chair. Thank you.

The CHAIR: Dr Cumming.

Dr CUMMING: Thank you, Ashley. You have given me a lot of food for thought, seeing that the vast majority of the presentations I have had so far explain that all smoke is dangerous—so really even setting standards does not make sense because all smoke is dangerous. But I am going to stick a little libertarian hat on and act as if we take the approach that we actually educate the community and they can make the decisions for themselves. I also take a libertarian approach that we are not allowed to harm anyone, no matter what, even when you educate and then you realise there are health harms that you have to actually act on. With your association, do you only deal with wood-fire heating? Obviously you are called the Australian Home Heating Association. Is it just wood fire?

Mr STRIDE: Wood and pellets, so any solid fuel, whether it be boiler coal—

Dr CUMMING: So obviously even though the association's name is Australian Home Heating, if you gave me a priority of heating—if it was reverse cycle, if it was gas, if it was hydronic—you are probably coming from the perspective of wood fire or solid fuel.

Mr STRIDE: Solid fuel.

Dr CUMMING: Thank you. For myself also I just really would love to understand what year, if we had to draw a line in the sand, would you say that previous wood fires that people would have had installed in their homes would not be—the heater that you were speaking about, which you kind of called a green heater, when did they actually come into play? So if it was 2020, all the heaters prior to that might have met the Australian standards current at that particular time, but we have got new technology. Is that what I would be guessing to be right?

Mr STRIDE: Pretty much from 2018 onwards—the previous standard change was a two-step standard change. So it changed in 2016 and then changed. So it was one piece of legislation, but it basically changed the two—2016 then 2018 as well.

Dr CUMMING: So I guess, Ash, I am just going to ask another question then. So 2018—I will just accept that as an answer. Are there any technologies in play that you could retrofit for old wood fires, in the way of a better flue systems, filtration systems, better internals, seeing that I see a lot of wood fires where, as you were talking about, the clay or those bricks get broken. Are there things we could actually be educating on a statewide basis, not just trying to find your association—

Mr STRIDE: Absolutely, yes.

Dr CUMMING: getting onto a video. Is there something the Victorian government could do to better educate? And just keep these questions in your head, Ash.

Mr STRIDE: Sure.

Dr CUMMING: The other one is around—my previous life I sat on a council, so I obviously got lots of smoke complaints over my time. I know that if somebody complained about smoke, the health officers would attend. They would check that the wood—your solid fuel source—is actually covered with a tarp and is not

getting wet. They would check that there is not an open fire in the backyard—that it is an internal fire. Are there any other things that we could actually put in place to make that better—legislate that it has to be seasoned wood, it has to be covered, and it would have to be a certain 2021 standard that we could look at retrofitting or doing things? I will leave it up to you, Ash.

Mr STRIDE: Yes. It would be difficult to retrofit an older unit with newer technology just purely on the basis that the older units are very simplistic versus newer units, which certainly do a lot more in regard to the way that they operate and work. I will touch on what you said there in regard to fixing things inside the units and stuff like that. Maintenance is a massive part of these units as well—ensuring that you have got door rope seals correct and you have got flue cleans done. A dirty flue is going to do two things for you: it will hamper the fireplace operation, but it is also an extreme safety risk inside there. As an association, and even myself as a manufacturer, we 100 per cent push that you should be cleaning a flue out at least every 12 months to ensure that you are getting correct operation of that fireplace but also for the safety risk of that site as well.

When it comes to fuel, you mentioned there a couple of times making sure the fuel was covered with a tarp and stuff like that. It is a pretty big misconception that wet fuel—physically wet, as in wet from rain and stuff like that—is more seasoned, which you were talking about there. The reason why we gave a lot of what we call moisture meters out to a lot of those councils was that that is the biggest weapon. We know not only as an association helping local councils but also as manufacturers that if you are burning unseasoned, wet wood in a modern fireplace with modern technology, it simply will not work. The complaint we will get from the customer is that the fire goes out; it just does not work at all. It harks back to going back to the site and checking that out there, and 90 per cent of the time when we are looking at something like that, it is going to be coming back to that fuel. Education into fuel and making sure that people get the correct fuel—as we touched on before with that wood that has now fallen due to those storms through there, it is imperative that that is treated correctly before it is actually used inside that domestic-use fireplace.

Dr CUMMING: Thank you, Ashley. I would have thought that you could have retrofitted, but it gives me a clearer understanding of what possibly would have to be removed, because obviously all smoke is dangerous—but to understand a little bit more about the newer technologies. Now I understand that local councils and health officers probably do not really understand the difference between the moisture ratings and what that really means, because they are just running out and saying, 'Put a tarp over it. It's wet. Oh, you're not complying'.

Mr STRIDE: Yes, that is it. And when we go to a site, the home owner will have a stash of wood here which is the one that you are going to be looking at, and then you walk around the back and you find what they are actually burning. That is the issue.

Dr CUMMING: Do you think there is benefit in talking—even this committee, actually—to the firewood association to further understand solid fuels and have a better understanding around that so that we can actually therefore as a government educate the community on what you should and should not burn and those kinds of things?

Mr STRIDE: Certainly. I mean, their association is obviously for the fuel merchant, versus us, which is the product manufacturer, so we obviously work hand in hand together but do have two very different member bases there. The firewood association is based in Melbourne, so they are a Victorian association—obviously Australia wide but based in Victoria—so I am more than sure that Dane McGreevy would be happy to have a chat to you.

The CHAIR: Okay, thanks. I think we will go for a second round of questions. I have got nothing further at this stage, so, Ms Bath, I am not sure whether you are there, or Dr Ratnam.

Dr RATNAM: Thanks, Chair. We had a submission to the inquiry from the Clean Air Communities that revealed that wood heaters contribute 28 per cent of the PM2.5—so particulate matter 2.5, which we know is one of the 45 main pollutants contributing to air pollution—emissions in Victoria, and we know PM2.5 is classed as a class 1 carcinogen by the World Health Organization. We have had real issues brought to the attention of the committee about the reporting of the wood heating industry, which claims that they have a certain amount of efficiency on emissions of pollutants, versus the real-life testing which has found much higher, very dangerous, levels of the same pollutants in a real-life circumstance, and yet people are still installing these heaters and using them in their homes. Despite the safety advice that you have or the industry

attempts to communicate to potential buyers, we have also had research evidence that suggests that that safety advice, despite being adhered to, does not reduce substantially the exposure to these pollutants and the associated health impacts.

Is the industry worried about potential future legal exposure, similar, for example, to what the tobacco industry faced when they were found actually liable for exposing people to dangerous levels of harmful toxins that affected their health—in this case wood smoke? So my question is: is the industry concerned about potential legal exposure given what we know from the research and the years of findings we have had about the impact of wood smoke?

Mr STRIDE: It has certainly not been a discussion that we have had.

The CHAIR: Thanks for that. Dr Cumming.

Dr CUMMING: I have a further question from your submission, Ash, around—sorry, it has just escaped my head. Sam, what were you just talking about? It has just escaped—

Dr RATNAM: I was talking about legal exposure given the PM2.5 exposure levels from wood heaters and that being a class 1 carcinogen—PM2.5 is a class 1 carcinogen.

Dr CUMMING: Yes. I guess, Ash, my question is around the same. We have obviously heard a lot around that all smoke is actually dangerous. Sorry, it has come to me now. We have also heard that obviously a lot of people are off the grid, just like Ms Bath was saying earlier, and that it is only poorer people, vulnerable people, that actually have wood fires. My understanding is that the uptake of wood fires is actually by more affluent communities and that you would be selling a lot more, as you have mentioned, in the eastern suburbs with the price of the current heaters with the newer technology or what you call green wood fires. I think it is a misconception that people who do not have money need a wood fire because they can actually source the wood, as you were saying, off the side of the road and then they can feed into this. But due to health that might not be the best form, seeing that they may be using, like you said, a primitive wood fire. It is not doing anything for their health. Ash, you would have an understanding of the sales. Have you been selling a lot of product to the eastern suburbs in the last 12 months or the last two years—

Mr STRIDE: So the definition of—

Dr CUMMING: for ambience? That is what I understood. From what I have read a lot of the redwood coming from New South Wales—there are shortages—that hardwood, is actually going to the eastern suburbs because it is actually very expensive to buy that redwood, the red gum, and the heaters are very expensive and people are buying it for ambience. They have already got an electric heater, they have probably got a gas heater, they have probably already got hydronic, and they are buying a wood fire because of the ambience.

Mr STRIDE: Well, I can take my Home Heating Association hat off for a second. I work for a manufacturer that does both gas and wood fireplaces, so for ourselves I would argue that quite substantially. Our market in Melbourne is 95 per cent gas in regard to fireplaces, and they are buying it for that exact reason—what you were saying there—which is the ambience inside there as well. I am certainly not discounting the fact that there are people that do buy fireplaces for ambience—being a wood-burning fireplace in that respect—but it is an extremely small market for us. The major market that we do is primary source heating for regional areas that are not on the natural gas reticulation.

Dr CUMMING: But also too, Ash, I just want to ask another question on that. Is that Airbnbs or—do you know what I mean?

Mr STRIDE: Yes. I mean—

Dr CUMMING: Because if they are purchasing them—I am guessing it is the pricing I would like to know. If I went and got a wood fire today, how much would it actually cost to put in compared to your gas heater?

Mr STRIDE: Okay, so installation costs or just the product price itself?

Dr CUMMING: Both.

Mr STRIDE: Both? Okay. Gas is substantially more to install and as a product per se. The market is quite large in regard to it, and obviously it is the same as buying a car in regard to you can start at one end or the other. With a gas fireplace, you are going to have an average of anywhere between $4500 up to around $16 500 for a gas log fireplace. Obviously that is a pretty extreme amount. Your mean price is going to be about $7500 to $8000. Installation of that is going to vary from anywhere between around $2500 to $3000, obviously depending on how you are going to install that—whether you are putting that into a wall or how far you need to run gas, all those variables that go into it as well. A wood-burning fireplace, again, has a very big, dramatic scale in regard to where it is, so you can start at the bottom end, which is around $900, going up to around $10 500. Again, that mean price is going to be around that $3500 to $4000 mark inside as well. Those variables in price are going to be pretty much where it is manufactured.

Dr CUMMING: I do not want to upset you, but just with your prices that you have given, I am guessing that the more expensive ones would be the green ones with all the technology bells and whistles. And currently within the market you are probably selling things that not so much do not meet the standards but might not meet the environmental standards—that are currently, as you said, rudimentary technology.

Mr STRIDE: Every product needs to meet the standards, so what you find is that it is how the fireplace is going to operate, and what the end user gets is the result of better technology inside the unit. So you can have a $900 unit which meets standards, but the customers are going to get about a 3- to 4-hour burn time out of that type of product, and it is basically just allowing more primary air into the product to be able to burn cleanly. You can spend a bit more money and get a product which actually has a proper tertiary air set-up in it, a secondary air set-up in it, an air-tube system—all of those in there. You are still going to achieve that 12- to 13-hour burn time out of it whilst maintaining the standard that is required.

Dr CUMMING: Yes. So that answers my question, Ash, because obviously the more you spend you will make sure that your neighbours will not complain about the smoke. And if you spend less, you will get a good burn, but you are still going to produce smoke, and you might not have—

Mr STRIDE: No. I disagree with that statement. My statement was that if you are spending more money on a product for technology, you are going to get a longer burn time, so you are going to get that—

Dr CUMMING: Oh, okay.

Mr STRIDE: Yes. The smoke emission will not change between whichever one is there. It is the ability to be able to shut a fireplace down whilst maintaining 1.5. You need a certain amount of technology to be able to do that. The easiest way to do that is just to basically not allow the fireplace to shut down, so if you have got a cheaper fireplace, that is generally where it is going to be at. It is going to be just basically, 'We've got to control the fireplace to be able to shut down'. You are going to spend a little bit more money on a fireplace which is basically generally designed for the European or North American market. It is going to shut down whilst also doing usually 3 or 4 hours burning inside the fireplace to be able to keep that particulate matter right down.

Dr CUMMING: Okay.

The CHAIR: Thanks, Dr Cumming. Ms Bath, a question?

Ms BATH: I am all good, thank you. It has been most instructive. Thanks for being here.

Mr STRIDE: No problem.

The CHAIR: Anything further, Dr Ratnam? No. One last question, Dr Cumming, or are you all done?

Dr CUMMING: No, I feel all done. I have still got a million questions in my head about this, though. I want to learn more.

Mr STRIDE: You can contact me at any time, or the association. We are always happy to talk.

Dr CUMMING: Thank you, Ash. I really want to get my head around it.

Mr STRIDE: Sure. No problem.

The CHAIR: Okay. Fantastic. Thanks very much, Ashley and Eunsil, for coming in today and giving your evidence. It has been really insightful and helpful for the committee.

Witnesses withdrew.