

TRANSCRIPT

LEGISLATIVE ASSEMBLY ENVIRONMENT AND PLANNING COMMITTEE

Inquiry into Tackling Climate Change in Victorian Communities

Melbourne—Wednesday, 26 February 2020

MEMBERS

Mr Darren Cheeseman—Chair

Mr David Morris—Deputy Chair

Mr Will Fowles

Ms Danielle Green

Mr Paul Hamer

Mr Tim McCurdy

Mr Tim Smith

WITNESSES

Ms Davina Rooney, CEO, and

Ms Sandra Qian, Senior Manager, Policy and Government Relations, Green Building Council of Australia.

The CHAIR: Welcome to the public hearing. Before we begin there are some important formalities I must outline. All evidence taken today will be recorded by Hansard and is protected by parliamentary privilege. This means that you can speak freely without fear of legal action in relation to the evidence that you give. However, it is important to remember that parliamentary privilege does not apply to comments made outside the hearing, even if you are restating what you have said during the hearing. You will receive a draft transcript of your evidence in the next week or so, so that you can check and approve it. Corrected transcripts are published on the Committee's website and may be quoted from in our final report. I understand that you have been informed that today's proceedings are being broadcast live on our Parliament's website. Please be aware that footage from the website can only be rebroadcast in accordance with the following conditions: the material must only be used for the purposes of fair and accurate reports of the proceedings and must not in any circumstances be used for satire or ridicule or commercial sponsorship or commercial advertising; broadcast material must not be digitally manipulated; any excerpts of the proceedings must be placed in context to avoid any misrepresentation; and remarks that are withdrawn are not to be rebroadcast unless the withdrawal is also rebroadcast.

Thank you for making the time to meet the Committee today. Could each of you please state your full name and titles before beginning your presentation?

Ms ROONEY: Davina Rooney, the CEO of the Green Building Council of Australia.

Ms QIAN: Sandra Qian, Senior Manager—Policy and Government Relations, Green Building Council of Australia.

The CHAIR: Terrific. Over to you.

Ms ROONEY: Fantastic. Thank you so much for having us today, and we really welcome this Inquiry into this important area of the Victorian Government's role in the climate emergency. So to provide some context, I have the privilege to lead the Green Building Council. It is a privilege to be here with you today. On the role that the Green Building Council play within industry, our role since 2002 has been to help lead the sustainable transformation of the built environment, and we do this by a number of ways. We partner with industry on education, advocacy, ratings—our own ratings, Green Star—and we seek to collaborate across the sector. So what I will do is I will unpack what a few of those things mean so that we can actually explore them through the Committee.

We represent over 550 organisations with an annual turnover of \$56 billion, and our members range from major developers, professional services, banks, superannuation companies, product suppliers, tenants who are actually engaged and major government organisations through to councils. Our role is to partner with industry to develop healthy, resilient and positive places.

In terms of the rating we have a tool, Green Star, that we have been operating since 2003. It is internationally recognised. We also work with New Zealand and South Africa to deliver the tools internationally. It is used as a benchmark across industry, and I was very pleased coming through the foyer to discover that this building is in fact Green Star-rated to evidence its sustainability.

Mr FOWLES: How many stars did we get?

Ms QIAN: Four stars.

Mr FOWLES: That is not too bad.

The CHAIR: Out of?

Ms ROONEY: Out of six, so that is our Australian best practice measure—

The CHAIR: A pass mark.

Mr FOWLES: Yes, a pass mark.

Ms ROONEY: which is what we would encourage. As of June 2019 more than 2350 Green Star certifications had been issued across 2000 assets in Australia, and they come in buildings of all shapes and size—office buildings, hospitals, hotels, broad accommodation in apartments, university campuses, public buildings. So in Victoria there are 645 buildings that have been certified, and we seek to partner with industry to develop and enhance those standards over time. Now, why would someone do that? That is because when we have reviewed what those buildings have achieved, they are designed and built to produce over 55 per cent less greenhouse gases than a typical building, use 66 per cent less electricity and 51 per cent water and recycle 96 per cent of their waste.

When we look at the Government's track record and strong governance in this space we look at projects like Fishermans Bend, which is actually Australia's largest urban renewal project, and we seek to work across the frameworks of the communities and then take some of those to the building scale, or the City of Melbourne, who I know you have heard earlier in this Inquiry, we work with them on their ESD policies to apply through their planning protocols and indeed their own buildings.

These are some of the frameworks that we seek to partner with industry to engage, but one of our focus areas is: how do we actually take industry and how do we transition to the future? We are aiming to achieve the Paris Agreement. How do we set up the building stock within Australia for a 1.5 degrees future? So a couple of years ago we published what is called a Carbon Positive Roadmap, and we are setting a trajectory for how our tools will go to net zero. So the tools that we are releasing in the middle of this year, our 6-star, our world leadership, you will actually need to be net zero in operation to actually achieve those tools and use less energy in the creation of the building—embodied carbon. Then over a period of time we actually transition that from 6-star to 5-star to 4-star because our aim is actually to deliver this transition to industry and work with the supply chain to train.

We also run international programs for net zero, where we actually sign off from buildings to entities—companies—to cities. So Paris, New York, California have signed up to this alongside the City of Sydney and Melbourne. We work with some of the major developers, like Dexus has committed their entire portfolio for net zero 2030, and we work with about 18 participants across Australia and are signing more up because we also certify on behalf of Climate Active. So our aim is to actually use some of our toolsets as advocacy. Last year we launched with the Property Council of Australia a toolkit called Every Building Counts, which we see as a framework. We have launched at a federal, state and local level: how do you take the complexity of the Australian environment and seek to actually deliver net zero buildings in every context?

So we were enormously welcoming when this Inquiry was announced because we really see a need to transact from the policy level, to unpack the things that this Committee is looking at, and take those policy levels and actually turn them into something that we actually use as pathway for change. We have been very involved with the National Construction Code with the changes, so COAG has endorsed a pathway to net zero by 2030. We were involved both in the committees and in advocacy but also in the training for the new construction code in all sectors other than residential. Then for the National Construction Code 2022 we are involved with the residential committee, and we are really seeking to partner, to lead voluntary action, in a way that can amplify those causes.

I know we are going to use this Inquiry to unpack our submission, but we think that there are a few key themes, the first being resilience through infrastructure, whether that is hard infrastructure, social infrastructure. A second focus area which we think is deeply important is using buildings to actually hit Victoria's emissions reduction targets. We are very heartened by the commitment, but we would love to unpack some of the stages that go through that for implementation. Then the third element: more help broadly with facilitating sustainable urban development, which we think is fundamental. Buildings are really important, but how do we create special liveable places that we deliver in connection with urban regeneration that connects people to transport? We are very cognisant that it is sometimes a far more saleable community message: that we really need to look after the wellbeing of our communities, so it is a great reason to walk your kids to school. That is a fabulous thing to do from a health and wellbeing perspective. It also delivers really large carbon emissions reductions when we actually change the way we use transport interchanges, and it opens up that opportunity. We would

actually see that carbon really needs to be encompassed with some of those broader social areas, so we actually look at how we encompass those together.

We are absolutely thrilled to collaborate in this space. When we reflect on government's leadership, we were formed through some of government's leadership, and some of that leadership came out of Victoria. So Sustainability Victoria is a founding member of ours, a key partner of ours. When we actually look at some of the innovation we are seeing in Victoria, particularly in the rail sector, it makes us very excited in the opportunities that we see in this space.

The CHAIR: Fantastic. Thank you for your submission and your presentation today. It sort of occurs to me that if we look at the Melbourne CBD or indeed a greenfield site like Fishermans Bend, there is often an opportunity in spaces like that to set a higher benchmark as perhaps an initial trial period for regulations, including building sustainability. Obviously you have been very active in the advocacy space and public policy development space. Often where things fall down from there is then putting it into regulation that is mandatory. Do you think there is an opportunity to use a Fishermans Bend-type precinct or a Melbourne CBD-type precinct to set a higher standard as a trial site, as an early area for deployment?

Ms QIAN: It is one of the initiatives that we are working with. It is one of the initiatives that we are working with the City of Melbourne on as we speak as part of their *Green Our City* action plan. One of the actions they have committed to is to review their environmentally sustainable design policy, which currently refers to Green Star as a benchmark of sustainability but looking to increase that benchmark in line with our *A Carbon Positive Roadmap*.

The CHAIR: And do they have the tools to set those standards at a high level, or would they simply be sort of best practice guidelines as opposed to regulated, must-achieve outcomes?

Ms ROONEY: One of the challenges that we see, and Sandra can further articulate on this, is often we use pilot sites, but how we scale those has been quite a challenge. So we have seen leading councils like the City of Melbourne go ahead, but there has been a constraint: how does that line up to State and Federal development policy? And when we look at these frameworks, there are over 650 councils in Australia, so I think the opportunity is to take things that the City of Melbourne are doing and then actually really establish an alternate higher benchmark pathway for councils so that they can go to the same place. That is something that we advocate for in *Every Building Counts*, but we see that there is a real harmonisation opportunity, because there is a genuine risk that people allocate net zero precincts, but if council does not have the enabling tools and the agreement with state government to make building-based changes, some of these precincts occur with code-compliant buildings. So how do we actually stitch together some of these frameworks so that we can actually amplify lessons like the City of Melbourne and take those across all the councils, not all of whom are as well resourced with the experts that we actually see in some of these leading councils?

I think we do really well on a pilot site, and I would say Fishermans Bend is another pilot where they have signed up for Green Star – Communities to actually use to control their governance frameworks, and where they have direct control they are actually making requirements for the buildings to have a higher rating themselves. But I think the overarching challenge is, when we step away from the leaders, how we actually scale these aspects in a way that those who do not have the same degree of sustainability expertise or do not have the same resourcing models can actually drive them, and I would say that is both in planning terms but also as we work with all the property areas across multiple state areas.

Ms QIAN: Absolutely. One of those tools, I think, from a Victorian Government perspective in terms of policy guidance would be a level of guidance around a statewide ESD policy, which I understand is one of the issues that has come before this panel. At the moment the Victorian Government is looking into this area, and we would definitely encourage more collaboration with local governments in that regard and industry bodies.

Mr HAMER: When I look at the building stock I would say the vast majority of our building stock is still residential, and even if we project quite a few years into the future the existing building stock is still going to make up 50–60 per cent of our building stock. With the exception of probably the CBD, of the new building stock a lot more will be townhouses or relatively small developments. They are not going to be the Fishermans Bend or the bigger developments where you can have some input. I was just wondering, from a council's point of view, given that that represents the two largest quantum, I guess, of both the existing build and new build,

what recommendations would you make or what sorts of policies do you have—maybe—in place at the moment that can actually assist in those two markets?

Ms ROONEY: I think we are due to have the National Construction Code review for residential, which is being formulated at the moment. The role of that residential construction code, which is seeking to do uplifts, is critical in that space. We know that of the buildings that stand in 2050 more than half of them in the residential space will be built between now and then. So actually getting those minimum standards to an appropriate level and actually partnering with industry to deliver them is critical. Something that we are turning our focus to is very much, as you say, ‘There is a large amount of resi construction; how do you reach that cohort?’. So we are actually putting together a program that we are due to launch for consultation in April, a volume home builders program where we actually discuss, ‘How do you take where the code is going and go there in a voluntary capacity?’, so we can actually take some of these opportunities and lead them at scale, because you are right: we really need to find that missing middle. The Green Building Council already certifies apartment buildings, and we have over 400 000 people moving into Green Star communities, which are often in that outer ring that you are describing. But we acknowledge that there is still a huge amount of work to be done in that space. Sandra, would you like to talk to some of the work that is occurring in the existing space that we are reviewing?

Ms QIAN: In existing buildings one of our key priorities would be around the mid-tier office building sector. What we term mid-tier—these are non-premium grade assets or B and C grade, according to the property council’s office building matrix, and these are assets typically built before the 2000s which have lower energy performance and less opportunities to upgrade or retrofit due to the fragmented nature of the ownership. So one of the policies that we are looking at in terms of improving existing office buildings that are termed mid-tier would be to work with State Government through programs like Sustainability Victoria’s Better Commercial Buildings program, which has provided match funding up to \$30 000 to retrofit existing mid-tier offices and delivered lots of benefits.

Ms ROONEY: So that is a policy position. The thing we do in our partnership with industry is we have launched a performance tool at scale, and we have over 1000 existing buildings. At the council’s inception about 18 years ago we were originally working with the leaders in the market. We are now expanding that to go from the property groups that are the scale of the Frasers and Stockland investors, but we are also taking that scale to the QICs, the Cromwells. We have been very excited to be partnering with the Woolworths group to improve performance over their existing asset.

We think we have two roles in this space. One is to provide the access and create the carrot—you know, so some of these voluntary programs—but then to continue to work with our partners like NABERS as they deliver some of the mandatory programs, and we run joint education pathways as we bring these spaces together. So we actually think there are a number of complementary pathways that are needed to lift and shift that important missing middle that you reference.

Mr FOWLES: So there is the NABERS regime, there is the Green Star regime, there is the BESS; can you tell us a bit about this sort of melange and how much overlap there is and what opportunities there are to potentially have a unified environmental performance regime, for want of a better—

Ms ROONEY: So the Green Star – Performance regime is a holistic regime, and so we pull in the NABERS areas as they are relevant. So, for example, we recognise the NABERS energy both in our design and in our operation, whereas we run what we would describe as the holistic tool, which is across energy, water and waste, and we are including social inclusion, place-based resilience—those aspects. Now, appropriately, they run very technical, very deep, single-line focused programs across a number of those areas, and they bring a degree of technical depth and expertise which is second to none in the market. So we really position ourselves as long-term partners, and we want the same outcomes, and—

Mr FOWLES: So you see yourselves as complementary to them.

Ms ROONEY: We see ourselves as complementary—

Mr FOWLES: But their focus is just on energy consumption, is it?

Ms ROONEY: Well, they do energy in certain asset classes. So they do energy in office, retail, hospitals—

Mr FOWLES: NABERS—N-A-B-E-R-S.

Ms ROONEY: Sorry, the National Australian Built Environment Rating System. And they are looking to extend as well in other sectors in energy. They offer water at the moment across office and retail and they offer indoor environment quality in office at the moment, but a big service they are doing for the waste validation market is an online tool that they are launching in the waste space.

We see ourselves as complementary partners who actually use our work together to actually lift together in industry. What we would actually say is there is so much opportunity. The phase change that we need to make is so substantial that we need to work with partners in a harmonised way to make the change and the transition.

Mr FOWLES: So Green Star operates at the design and build end; NABERS is more focused on existing buildings.

Ms ROONEY: We also operate Performance, which recognises their tools in it holistically. So when we talk about performance we will recognise everything from green cleaning contracts to waste performance, to management contracts where you partner with tenants, and leadership positions. So it is a very holistic, whole of sustainability, whereas they run deep, excellent single-issue tools that we recognise.

Mr FOWLES: Sure, but I mean, wouldn't it, in an ideal world, be better to have that all come out of one shop, for want of a better expression—to actually have a building environmental performance body that kind of deals with all this stuff?

Ms ROONEY: Look, we do think that there are opportunities for different areas, as long as it is seamlessly harmonised. So some of the things that NABERS, which is run out of DPIE, has done is running mandatory programs—

Mr FOWLES: Sorry, run out of?

Ms QIAN: DPIE, the Department of Planning in New South Wales.

Ms ROONEY: The Department of Planning, Industry and Environment out of New South Wales, with a harmonised national governance arrangement. And that is established because they also run mandatory disclosure, which is required for office buildings that are leasing over 1000 square metres. So we believe that their mandate actually works best for their role in regulatory compliance that they play in a number of sectors in mandatory disclosure. Due to our set-up and us being a charity and not for profit, we are actually in a far better position to go and seek to partner with key developers for the kind of change we would like to drive in residential communities and run Global Thought Leadership programs, which we collect with a series of charities, and actually for us to run these programs internationally.

So the one thing that I probably should have emphasised earlier is the leaders in the Australian property market in sustainability are the global leaders. So if we look at the Dow Jones Sustainability Index, which is the global benchmark for quality in the sustainability space, or the Global Real Estate Sustainability Benchmark—they reference themselves asGRESB—Australia has consistently led on those indices for the last nine years and further. So we have actually at the top end of that market a highly sophisticated, highly integrated market that can actually manage and scale well across the complexity that we described. The thing that I think is the genuine opportunity that this Inquiry is not unpacking is: how we take that to every building, every school, every opportunity and how we actually scale those well. We are very open to partnering, as you can see, collaboratively in a multitude of formats to get the most change.

Mr FOWLES: So my concern here is not just about the efficiency of having multiple agencies doing this stuff. It is actually about the consumer recognition piece. Some people would know what a neighbour's rating is. You instinctively—that Green Star is good, it is a nice intuitive title, but the BESS, that is not going to mean anything to anyone outside of the industry. So is there an opportunity to at the very least come up with a nomenclature that can be readily understood right across the various levels, all the way from big-arse commercial-government things down to small residential?

Ms ROONEY: I think there is a genuine opportunity for how we use language better. It will not surprise you that when we are going into our new tool suite I am moving from language like 'indoor environment

quality' and repositioning it as 'healthy', because that is the language that normal people use. You know, people like me, engineers, we have to make sure that the climate emergency that you are investigating is everyone's problem. You know, 20 years ago we used to talk about climate change as being distant and far away. It is very immediate and very close. So we have to reduce the technocratic language and make these things far more accessible. So I would actually say groups like NABERS have had a very sophisticated business language lens, because they have been dealing with that part of town. I actually think for the detailed complexity and diligence that they land with their standard is appropriate. I think the role is for ourselves to work collaboratively with you for how we position these things for the community, because really what they want to do is to build it back better or know that they are actually making changes that ensure themselves, their family and their community's future. I think the challenge for all of us is, one, how we harmonise the complex frameworks between the different elements and agencies delivering these things with a focus on the same change, and then a communication piece about how we make this clearly accessible for all. We have been unashamedly turning our position for how we actually—

We did a launch with Country Road with *Vogue* magazine for their new Green Star facility because we want to reach a different audience. The sustainability leaders have been aligned for a long time about what needs to change, but we have to do a better job together bringing the population with us and the community with us.

Mr FOWLES: In terms of the regimes part of the challenge, we have received evidence on the journey about the desirability of ESD—environmentally sustainable design—the desirability of that but the risks that attach to things not actually being built as designed, how you certify it, how you monitor it, things not being maintained in such a way that their ESD performance is held. Do you have a view about the best way we collectively could be doing the testing, the monitoring, the certifying, actually building system-wide confidence in built standards?

Ms ROONEY: We have a strong view. For our own standards, as we administer them, we are ISO 9001 certified. We are as a rating tool registered with the ACCC for verifying our standards, and we run really rigorous governance processes across each technical area and governance committees because we think it is fundamental as we ask others to be more transparent that we are very transparent and rigorous in ourselves. For each element, if it is as-built verification, we need certificates to verify what is built. If it is performance certification, we need to verify the performance. Even when we do communities rating, we actually rate them at the start and then check in every five years that they did what they said they would do. So we think accountability is really fundamental, but we do think that there is an opportunity to actually make clear from a government perspective to formally recognise some of these attributes—that if you are going to run a rating scheme, you have to be verified for quality yourself, and you actually have to go through these benchmarks and be a little bit more transparent and then work together on a communications piece as it goes out.

Mr FOWLES: And do you see it as an appropriate role for government to run that rating scheme?

Ms ROONEY: I think it would depend on which scheme in which place. One of the things we are seeking very much to do is have more public memorandums of understanding for our long-term partners. One of the reasons is because it increases the transparency about partnership, which unwinds misunderstandings of lack of alignment. So we think that it is very important to at least have guideline documents where we formally confirm what we think are important in frameworks and then deliver those together, even if it is delivered through ourselves.

Ms GREEN: Thanks for that. I represent one of the fastest-growing electorates in the state in Yan Yean, so that northern growth area. I have been in for 17 years, and the 6-star residential rating has been in for seven years. How long do you think it will take for us to get some further scale up than that; for example, that says a water tank or a solar panel? I have had people say to me, 'Why shouldn't we be required to have both?', and I agree with them. Also, do you think enough is being done at scale? So in those big developments, you know, the Aurora development in Epping North, which used to be in my electorate. It had purple pipe as standard in 2004–05, and that seems to have fallen off a cliff. I have not seen another greenfield development in my electorate since. It was kind of like there was competition around this, and it just seems like it is not there now. Also things like orientations of lots and buildings, you know, that micro subdivision planning. And also I have a real problem with the 6-star energy rating having air conditioning as standard. You know, if we got the orientation right, we would not be telling people that they have to put in energy, and it has really been probably

in the time I have been in Parliament that our electricity usage has gone up like that, and it is because of people's usage of aircon.

Ms ROONEY: So, look, I think there are a few things to unpack there.

Ms GREEN: A bit!

Ms ROONEY: One is—I think you are absolutely right—the transition that we have been seeing in the corporate sector we have not been seeing led into all aspects of the residential space, so we have seen leadership in some locations but, exactly to your point, we have not seen it transition to all electorates. So we see that there are a few aspects of that. One is the National Construction Code—all state departments getting around the COAG process and looking to take the residential scheme, which is referenced as 6-star NatHERS. The thing that was in consultation last year was the discussion that it might be 7-star NatHERS plus renewables.

Mr FOWLES: Sorry, NatHERS?

Ms ROONEY: NatHERS, which is the housing version, the actual national Australian framework for housing.

Ms GREEN: So what is the 7-star then?

Ms ROONEY: Well, what that generally means is it enforces a lot more passive design. It generally has requirements for higher insulation, higher shading, double glazing. Basically, it is trying to enforce a better thermal envelope, to actually reduce the reliance on the air conditioning standards, which you require. And so with the voluntary standard that we are looking to partner with builders to introduce to the market, we would be aiming for three simple things that kind of align with your framework, and we think they are saleable to a consumer audience: that they are net zero energy, so really positioning around a house without bills; a comfortable house, which is your other point; and the thing we have not discussed is resilience. In the current environment that we are in we really do need to be looking at rainwater tanks or third pipe—as you say, drought-efficient—and looking at the overall resilience of the house, using tools like the insulation.

Ms GREEN: The house and the overall estate.

Ms ROONEY: The Insurance Council of Australia, we are partnering with them on a tool that they have been looking at for housing resilience that could be provided. So I think you have made a couple of points. One is there is work to be done at the house itself, part of which is creating a leaders market on the voluntary side. The other is lifting the standards in Australia to transition. Then, you are absolutely right, there is what is happening in the whole-of-community piece: how we are delivering better transport, better livability. So it is worth noting that you do have some developers in Victoria, not necessarily in your electorates, who have been partnering to deliver frameworks that we have been involved in through Green Star – Communities, where they are actually deeply focused on lifting the sustainability around these aspects. Since inception we have had 50 Green Star communities that have signed up that are kind of looking at it from the aspects of Fishermans Bend to some university communities, but more than half of those are greenfield that we are seeing. We acknowledge, though, that there is a gap reaching every community, and so—

Ms GREEN: And it is people at the poorer end. It is just like, 'Oh, no, this is a problem for affordability, so we're not going to do it', and then they get saddled with these horrific recurrent bills.

Ms ROONEY: It has got to be affordability over a life cycle, not just first cost. Renew has been very good at trying to bring that narrative into play: that when we do not deliver quality housing it is the most vulnerable that are most impacted.

The CHAIR: Can I just pick up on that point? It is a bit of a wicked public policy challenge that there are two competing aims. The first aim is particularly about making housing as affordable as possible, particularly for those trying to break into the market; and the second is obviously from a sustainability perspective, from a livability perspective. I would have thought—and correct me where I am wrong—well-designed houses do not necessarily cost a great deal more initially. What are the indicative costs—the difference between having an energy-not-so-sufficient house versus an energy-efficient house? Like, what is the upfront capital and how long

does it take typically to pay that capital back before you are in front? What are some of the economics around that?

Ms ROONEY: So there are two parts to this. I am very excited to say the market is doing more work on this than we have actually ever seen them do to date. We are starting to work with builders who want to have net zero houses, and depending on where they are starting on the mark, they are talking of figures from \$15 000 to \$35 000. Some are benchmarking as low as \$15 000, some are benchmarking higher.

Mr FOWLES: So \$15 000 in additional cost over the standard product to produce a net zero house?

Ms ROONEY: Yes.

Mr FOWLES: That's cheap.

The CHAIR: So what would be the payback period for that in energy cost?

Mr FOWLES: Three years.

Ms ROONEY: It would be a little higher. You would be getting seven to 10 when you get all of it in there. So solar you can get lower than five in itself, depending on electricity prices. But we want to go after not just the house with low bills; we want to go after these comfort issues that you are describing as well, because the thing that keeps me up at night is that there was research last year that said that in Victoria there were quite a number of the elderly presenting to hospital with hypothermia. More than 85 per cent of those were found indoors.

Ms GREEN: Or heat stress.

Ms ROONEY: Yes. And so it is these aspects coming together. The other piece is supply chain. One of the reasons why regulatory is such a tool in the new space is that if you require a 7-star NatHERS house you increase the requirement on fabric, and suddenly you mean that higher quality products are available at scale in Australia. Then you also train all the key builders and their tradesmen in how to do these products well. This then trickles into the existing market.

I myself have bought a beautiful property with windows that almost seal. They are beautiful double hung windows. When I start to look at retrofitting those and double glazing openable windows, that market is only in its infancy. So if I look at that compared to a market like Germany, where you pay more for single glazing than double glazing, because it is not available, that is used as a documented reason why we cannot push for higher standards here.

So I would say that there are the costs now and then there are the costs where we actually run a trajectory, where we tell industry where we are going, which COAG effectively did in February last year when we said we are taking all the codes to net zero by 2030. The role of ourselves with government partners—and state governments—is actually to deliver a staged trajectory and, just like my colleague Sandra said, provide different incentives for different parts along the way to try and help people be incentivised to transition.

The CHAIR: So that \$15 000 to \$35 000 indicative figure, that would be the cost today, but if we brought on volume which brought on new product and so on and so forth, you would expect those figures probably to—

Ms ROONEY: Come down.

The CHAIR: come down significantly.

Ms ROONEY: One of the very exciting things about the move of the renewables is that it has been very hard to sell 'less' to the residential sector, whereas 'zero' is a lot more exciting. So surprisingly renewables open the door to less exciting conversations about efficiency. So when we talk to the builder market they can often sell the extra \$5000 or \$6000 more, whatever it is, or 'It would be \$15 000 if it came with a Tesla battery', plus those ranges when they come with batteries. They can actually sell that because that is visible to them. The piece that the builders are finding harder to sell is comfort. In Australia we have not had a traditional narrative. The best way to do it is to ask someone about the most uncomfortable home they have been in, and you start having a very engaged discussion. But unlike other global markets, people then do not relate that to

the quality of windows they want to buy, the installation they want to have behind the walls. So the role of ourselves in the standards we have put out is to try to take some of those invisible and make them visible and saleable to that market—try to reposition that as comfort.

The CHAIR: All done. Fantastic. Thank you so much. It was a very informed presentation.

Ms ROONEY: Thank you.

Witnesses withdrew.