## WITNESS

Mr Simon Holmes à Court, Energy Transition Hub.

**The CHAIR**: I declare open the Environment and Planning Committee public hearings for the Inquiry into Nuclear Prohibition. Please ensure that mobile phones are turned to silent and that background noise is minimised.

I would like to welcome members of the public who are watching this hearing via the live telecast. I would like to introduce members of the committee: Mr Meddick, Ms Taylor, Mrs McArthur, Ms Terpstra and Mr Limbrick, and I believe some of the other members might be joining us later on. Mr Hayes, who I believe is still there, is the Deputy Chair. Also I would like to welcome our witness for this session, Mr Simon Holmes à Court. Thank you for making yourself available, and we are looking forward to your contribution.

All evidence taken at this hearing is protected by parliamentary privilege as provided by the *Constitution Act 1975* and further subject to the provisions of the Legislative Council standing orders. Therefore the information you provide during the hearing is protected by law. However, any comment you may repeat outside this hearing may not be protected. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament. All evidence is being recorded. A copy of the transcript will be emailed to you, and if there are any corrections, please notify the committee secretariat in relation to that as the transcript will eventually be published on the website. I welcome Dr Bach back; I think he is joining us, and he indicated he might be leaving during the proceeding later on.

What we have provided is about 5 minutes or 10 minutes to give us an overview. We have received all the material from you in relation to today's proceedings, so members have read them, so give us a bit of overview and then we will go and ask you some questions. We have allowed 45 minutes for this session, so over to you, Mr Holmes à Court.

**Mr HOLMES à COURT**: Thank you very much, Chair, and I thank you for the opportunity to appear before this committee. I am a director of the Smart Energy Council and adviser to the Energy Transition Hub at Melbourne University. I was the inaugural chair of the advisory board of the Melbourne Energy Institute. I am the product manager for the Open NEM website and I write regularly about Australia's energy transition.

As I am sure the committee knows, there are two regulatory barriers for nuclear power in Victoria: section 8(1)(d) of Victoria's *Nuclear Activities (Prohibitions) Act* and section 140A of the commonwealth EPBC Act. Imagine for a moment that all social opposition to nuclear melts away and that a new era of bipartisanship emerges, strongly supporting nuclear power across local, state and federal governments. Imagine these governments removed the prohibitions and they worked efficiently to enact the thousands of pages of regulations required to enable a safe nuclear sector. Imagine then that the governments decided to provide financial guarantees and concessional loans of an unprecedented magnitude and agreed to take on the long-term waste storage obligations and indemnify nuclear projects against accidents. Now imagine that that political support remained intact across three levels of government and across five federal election cycles. With the social, political and legal barriers removed and with strong government support and regulations in place, now the difficult part begins.

Before a current generation nuclear power plant could be built we would need the following: an owner willing to turn a blind eye to the nuclear sector's track record of massive time and budget blowouts. We would need a retailer willing to sign a 30- to 40-year power purchase agreement for energy at two to three times the current cost and wait 15 years for the privilege of the first kilowatt hour. We would need a capable builder, but who do we turn to? Westinghouse is bankrupt. AREVA became insolvent and is now part of EDF. South Korea's Kepco has been mired in scandal. Perhaps we would go with Russia or China. We would need a community, preferably one on the coast, happy to host a reactor, and we would need confidence that the renewable energy sector would slow down and their costs would increase. Ladies and gentlemen, I agree with Dr Ziggy Switkowski, who told last year's federal inquiry that the window for gigawatt-scale nuclear has closed in Australia.

So that brings us to small modular reactors, the promise of small low-cost reactors factory produced at scale. Firstly, I should say, they do not exist or, rather, they exist only on paper. Yes, there are a couple of Russian

military reactors that were put on a barge in the Arctic last year. But do not be fooled. The cost was triple that of a new coal power station, and there is no assembly line churning out successors to this one plant.

The small modular reactor company closest to the market is NuScale, who scored a major win at the end of August with the US Nuclear Regulatory Commission certifying the safety of the design. Despite this, at a development cost of US\$950 million to date, NuScale has a long and commercially risky path ahead. The completion date for NuScale's pilot project, which still needs to formalise a large Department of Energy grant and pass through two more lengthy NRC approval processes, has slipped six years over the past six years and is not expected to be completed until mid-2030.

Only 30 per cent of the capacity of the \$6.1 billion pilot project has been sold, and the participating utilities have several opportunities to withdraw if the project does not meet a rigorous economic competitiveness test. On the current schedule NuScale will not sign a final construction contract until 2025. While NuScale has drawn upon well-understood atomic principles, the innovative design has never been fully tested. Now, it is likely to work, but typically new designs encounter teething problems that add to costs and push out schedules.

In my submission I have explained the technology readiness level and a commercial readiness index used to evaluate the progress from a napkin sketch all the way through to bankable product. In short, the SMR sector will have done well to have a handful of pilot projects operational by 2030, with one or two maturing to bankability by 2040. It is fanciful to believe that we know what they will cost, especially when the nuclear sector has an appalling track record of time and cost blowouts. Dr Jon Koomey, a renowned US energy expert, wrote recently that he has adopted a 'show me' stance with the nuclear sector: 'Don't tell me what you're going to do at what price; show me, and I'll believe it when I see it. That said, we should definitely keep a watchful eye on these SMR developments. It would be helpful if CSIRO prepared a detailed assessment as part of its biennial GenCost project.

I would like to talk about energy transition, my own speciality. Energy systems worldwide are in a profound transition. The need to reduce emissions is a significant driver, but nothing has driven this more than the appearance of cheap wind and solar power. I have a slide I can show you later that shows the rapid move in the UK away from a coal-based economy towards one that is decoupling from fossil fuels in the electricity sector. Now, Australia is behind the UK but is absolutely on the same path. We have closed 13 coal-powered stations in the past decade, and by the end of the 2030s most if not all of the rest will follow.

Renewables are filling that void at an impressive pace. In the last three years we have built as much renewable capacity as we built in the 30 years prior to that. We are not going into this blindly. AEMO, our energy market operator, has in the order of 60 people working in their long-range forecasting team. In July they put out the second revision of their integrated system plan. In the least cost scenario, which is no additional policies, we reach 76 per cent renewables in 2042, we use no additional gas and we have a sharp reduction in 'baseload generation'.

In the step-change scenario, the scenario that comes closest to meeting our fair share of the Paris target, the NEM reaches 96 per cent renewable energy. If this scenario is achieved—and there is good reason to be confident it will be—there will be no 'baseload generation' in Victoria and our grid will be cleaner than France's grid is now. AEMO have simulated these scenarios on an hour-by-hour basis. The lights stay on, emissions fall and the costs are close to business as usual.

The transition in Victoria's electricity sector likely will be mostly complete before we could build our very first nuclear reactor. Australia missed the first wave of nuclear power in the 70s and 80s. The second wave of nuclear is barely on the horizon, but it is looking like it might even be a mirage. If we needed nuclear power, this would be a tragedy, but thankfully we are on a path to decarbonising the grid without needing it.

Thank you, and I will hand over to questions.

**The CHAIR**: Thank you very much for that. Now, Mr Hayes, Deputy Chair, would you like to go first, or should I go with somebody else?

Mr HAYES: Nothing at the moment, thanks, Mr Chair. I will have a think about it. Thank you.

The CHAIR: Okay. What about I start with Ms Taylor and then Mr Limbrick and Mr Meddick.

**Ms TAYLOR**: All right. Okay. Thank you for that, Simon. With the previous witness I think there was a suggestion that if we just studied the facts, we would go nuclear and we would not be going with this very speculative step-change approach, because there are lots of hidden elements there, and everyone who is pro-renewables is underestimating fundamentally that this could be a solution for the future. What would you say to that?

**Mr HOLMES à COURT**: Firstly, I would say the team at AEMO has just completed what is probably the most rigorous report on energy transition ever undertaken, certainly in Australia and quite likely the world, on energy transition in a grid. There are more than 100 person years of work in the last edition of that report, and the consultation on that has been incredibly broad. The methodology is well documented, and the process has been incredibly transparent; many, many people have kicked the tyres of that review. Their process is to work out the least cost path forward under a number of different scenarios, and only one of those scenarios is tightly emissions constrained. That is called the step-change scenario. The central scenario is business as usual, and there are a couple of other scenarios, but in none of those scenarios does coal get picked. Coal is an allowable technology, and it is in the matrix, so in the least cost path forward coal does not get picked.

Now, in modelling I have done and all the modelling I have looked at nuclear comes in as more expensive than coal, so no matter what scenario we take, if we follow the least cost path forward, nuclear does not get chosen. There are also schedule issues, as I mentioned in my introduction. It is unlikely that even if we started now we would be able to have any nuclear operating in Australia before 2040, so it does not feature in our energy plans for economic and schedule reasons.

Ms TAYLOR: How many questions are we allowed?

**The CHAIR**: Look, I think we have got a bit of time because we have got a smaller number and we have got about 25 minutes, so please do follow up if you have one.

**Ms TAYLOR**: Yes, I have got a couple. I think the refrain we hear is residual power, how is that going to be fulfilled? I know you have spoken to that in your report, but that is where I think some of the doubts from the proponents of nuclear are sown. They are trying to say, 'We can fulfil that 4 per cent or whatever it is and that need for that dispatchable power'. What would you say to that? What are the alternatives to that? Because I think that is actually a pretty critical question.

Mr HOLMES à COURT: Thank you for the question. Chair, would it be possible for me to share a slide? I can show you this pictorially.

The CHAIR: Yes, that is fine. That would be great.

## Visual presentation.

**Mr HOLMES à COURT**: Okay. This is AEMO's step-change scenario here. Showing at the bottom is coal, gas, hydro, wind, solar and then storage. This is how they see the grid going in the step-change scenario which I mentioned before is the one that is closest to fulfilling our obligations towards the Paris agreement. This is the whole of the east coast—the national electricity market, not just Victoria—but Victoria's has a very similar shape. As you can see, coal comes down dramatically, gas plays a minor role, hydro does not get any more, but wind and solar provide the lion's share of energy. We do not need much storage but storage provides about 10 per cent of our power as we head towards 2042. So the question is: how do we manage to keep the grid stable as we lose that coal?

There is a quick slide here on how AEMO sees it. The mix of technologies: very much the previous speaker was correct, that energy is all about a mix. We could not power the grid with all solar, we could not do it with all wind, we could not do it with all hydro, we could not do it with all batteries. It will take a large and fairly complex mix to power the future grid. AEMO on this chart have marked a line, a dotted red line. This is the capacity of energy that is installed, and they have marked a line above the dispatchable sources. Underneath that line, as you can see, we have got black coal, brown coal, gas and hydro, and as we head towards 2042 and the gas and coal have gone to almost zero, storage makes up that difference. So we have wind and solar providing the bulk of the energy and then a number of dispatchable alternatives, which are pretty similar in size to what we have now, doing the fill-in around that. That in a nutshell is the AEMO scenario. By the way, the central scenario looks very similar to this, it is just about five years behind.

The CHAIR: Thank you, that is excellent. If you are able to send us all these slides, it would be excellent.

Mr HOLMES à COURT: Will do.

The CHAIR: Who will go next? Mr Meddick, Mrs McArthur, Ms Terpstra, put your hands up. Who is ready?

Mr HAYES: I will have a go.

The CHAIR: No, no, you missed your chance. Mr Hayes and then Mr Meddick.

**Mr HAYES**: Thanks, Mr Holmes à Court. That is very interesting. You might have heard, the previous submitter was saying that we really need to take the prohibition away so that we encourage nuclear as an option, otherwise we are going to come to a precipice that we do not want to face, that really we will not have enough energy to go around at a point in the future. Your slide seems to give us some encouragement. What do you think of the prohibition being an impediment to even the examination of the role of nuclear, financially and practically into the future? You are saying we do not need nuclear in the mix, but should the prohibition come off for it to be even examined as a viable option going forward into the future?

**Mr HOLMES à COURT**: In my introduction I listed all the prerequisites that need to come together in order for nuclear to play a role. I think the political and social issues are very challenging in Australia and seemingly intractable. However, if the economics and the engineering dictated that it was a viable pathway, I am sure that there would be a path to moving public opinion over time.

At the moment, as I mentioned, the economics are so bad that there is zero chance of any construction starting any time soon, until there is a new generation available. In that context I personally have no problem with the prohibitions being removed at state or federal level, but, as I said in my submission, in place as they are, they are symbolic. Removing them would likewise be symbolic. Nothing actually is being prevented by the prohibition and nothing would be enabled if those provisions were removed due to all of those barriers that I listed before.

That said, I think we should keep a watching brief on it. It is a long time before these issues are going to get solved at an international level, when nuclear's issues are going to get solved, and it is a long time before we start having any evidence that there is going to be any kind of power crunch. This is an issue that I think it is worthy to open it up every five years or so and have a good look at it, and I will leave it at that.

Mr HAYES: Thanks, Mr Holmes à Court.

The CHAIR: Can I go to Mr Meddick and then Mrs McArthur.

**Mr MEDDICK**: Thank you, Mr Holmes à Court. I have really three questions. I am happy for you to have me put them separately, or if you want, I can just run through them and then you can answer them. It is up to you in that respect.

Mr HOLMES à COURT: I am happy with that.

Mr MEDDICK: Okay, I will run through them all.

Mr HOLMES à COURT: I might need some help remembering them.

Mr MEDDICK: I am sure you will.

On page 1, in the last paragraph just before the graph at the bottom, of your submission you talk about the claims made by Bright New World around 8 per cent reduction in capital or finance obtained at 7 per cent to make nuclear viable. That was stated in a royal commission, but you claim that that is a misleading statement by Bright New World because it does not take into account the highly unlikely scenario of a carbon price that is well in excess of \$150 a tonne. And that is based on 2015 dollars when we had the prospect of a carbon price being around. Given that we simply do not have one, does that mean that Bright New World's arguments to this inquiry that they based around nuclear being viable should just be completely thrown out because they are underpinned by a scenario that does not exist?

The next one is on page 2 when you point to the fact that there are only five nuclear projects under construction—they are in northern America and Western Europe—which have been touted to this committee as the progressives, the ones driving nuclear forward and the benefits they are providing to their community. And you point out that all of them—all of them—have not been completed as yet. All of them are well over budget and well over time, and my question is I suppose—and you may not be aware—are you privy to or do you know is there public knowledge of just how much in those individual countries of taxpayer dollars has been propping up the construction, if any, and how much would be contributed by the taxpayer as a subsidy going forward, given that they are well over budget, to provide the energy to market? Are there any taxpayer dollars subsidising that to make it viable to the market?

The last one is on your point number four on page 5 that the prohibition is a distraction and that you presented at the federal inquiry that the prohibition is not stopping development and therefore it is purely symbolic. We deal in this particular arena in an ideologically driven environment. You have the left, the right and many other ideologies that drive the political landscape. The problem that you have with that then is that there is conceivably a scenario where if the prohibition is lifted—and I take your point that it is symbolic at this point—it would be driven by an ideology that is promotive of nuclear power as a generation source. We then have perhaps a federal government that matches that ideology and would remove it. Therefore, given what you have spoken about in point 1 and how it is so expensive and prohibitive, by removing these prohibitions that are largely symbolic in your opinion at the moment, do we potentially remove their symbolism and do we therefore make them a regulatory pathway to open up what I can only see as an economic disaster in subsidisation by an ideologically driven government to make sure that we have a heavily, heavily subsidised by taxpayer money nuclear industry in power generation?

**Mr HOLMES à COURT**: Thank you. So I will try to get to those. I will start with the last one first, and I might need some memory enhancers to get to all of that bunch of questions. So you are right. I think if it were to happen, the public sector would play a very large role. In fact it always has. I point out that to my knowledge in this inquiry not a single one of Australia's large energy companies—AGL, Origin, EnergyAustralia; none of them I believe—has put in a submission or appeared before the committee. The same stands for the New South Wales inquiry and the federal inquiry, and I think that is really telling. The electricity industry has no interest in this issue in Australia. A lot of my colleagues in the energy sector are bemused that I have spent so much time studying nuclear, because they see it as yesterday's technology and having no practical chance of being in Australia. So if it does happen, it would happen not because it is driven by the private sector. I mentioned in my introduction that the one plant under construction in the US, its final completion cost will be more than the combined market value of Origin, EnergyAustralia and AGL. Think of that for a moment. If the three companies got together and bet the entire farm on a project that could not be delivered for 15 years, they would just be able to afford to buy a plant like that outright.

Okay, so to your question: those plants—I can quickly go through them. France is building one project, the Flamanville project, which was announced in 2004 and is expected to be completed in 2022, so a full 18 years from end to end. It is now 480 per cent over budget. It is a government-backed, government-owned utility, so it will be fine, but taxpayers will be paying for that. Finland has a project that is 13 years late. Hinkley Point in the UK has been delayed. It was first talked of in 2006—a commitment to build it. It was supposed to be finished in 2017. It is currently on track to be finished in 2027, so a good 10 years late. It is not being built by government, but it is on the back of a government contract. It will be receiving for 35 years what works out to be approximately \$200 a megawatt hour. So that is five times the price that we have had in the electricity market over the last three to six months in Australia.

And then the Vogtle plant in Georgia in the USA, the only one under construction there, is just on twice the budget, running six years late. It is being paid for mainly by ratepayers. So ratepayers are paying an advance for a power station that hopefully will eventually power them. The VC Summer project, not far away in South Carolina, spent \$9 billion, mainly paid by ratepayers, before it was cancelled. So ratepayers will be paying for that project for many years to come, even though it is likely to never generate a single kilowatt hour. So there is, yes, a deep connection between public funding and nuclear power. In fact I heard a nuclear commentator say recently that there has never been a private sector-built nuclear reactor in the world that has not relied on government support.

The CHAIR: Thank you. Can I-sorry, are you finished?

**The CHAIR**: Yes. Can I ask you to maybe take the other two questions on notice for the time being. We have got 10 minutes to go. I do apologise for that.

**Mr HOLMES à COURT**: Chair, just quickly on the economics, I stand by my comment that Bright New World's economic figures—or their claims that nuclear could be economically competitive in Australia—are nonsense. Their reading of the nuclear royal commission in South Australia had a very significant omission. That report said that if we could get financing costs down or capita costs down, it could stack up. That was in the context of a \$150 carbon price, which we are not likely to have any time soon, nor would we need one that high for decarbonisation in Australia. And their capital costs are fanciful as well. They are a fraction of what we are seeing around the world.

**The CHAIR**: Thank you. Can I now go to Mr Limbrick, Mrs McArthur and Ms Terpstra. We can fill the next 10 minutes and any other questions can be taken on notice, if that is okay with everyone.

**Mr LIMBRICK**: Thank you, Chair, and thank you, Mr Holmes à Court, for appearing today. One thing that has been discussed a number of times is the idea of lifting prohibition as a signalling exercise or a gesture. To my mind a lot of what Australia is doing though—due to our rather minimal size in the global economy, a lot of it is a signalling exercise both in the renewables sector and in other sectors when it comes to decarbonisation, just due to our economic size. Do you think that there is any danger in lifting the prohibition? I think you said that you would not necessarily object to lifting a prohibition. Do you think that there is value in sending that sort of signal that we take decarbonisation so seriously that we want all options on the table, and if they turn out to be not economic then fine, we will not go ahead with them? Do you think that is a valuable signal to send to the rest of the world?

**Mr HOLMES à COURT**: Thank you for the question. Firstly on signalling, I would contest your assertion that we are just signalling with renewable energy. Our renewable energy target was not a signal. It was an industrial establishment program to establish the industry. For about the last four to five years we have been in the case where it is now cheaper to build wind and solar, including all of the system costs, than it is to build new fossil fuel assets in almost every case—certainly in all cases for coal. So we are not doing it for any kind of signalling. It is not being driven by any carbon policy. We are doing it because it is the cheapest way of moving ahead. Is there any danger in lifting these? Well, no, I think as long as there is an appropriate regulatory framework—and the regulations that underpin the Nuclear Regulatory Commission in the US run to thousands if not tens of thousands of pages, and as long as we have the institutions, the current institutions would need to be beefed up significantly, and I think the public would need to have trust in those institutions.

One thing that I find a little bit amusing is the minister responsible for nuclear regulation at the federal level is the same minister who is responsible for aged care. I think most of the public would be disappointed at how the regulation of that industry has played out. So I guess my only concern would be regulatory failure. But, as I mentioned, we do not have the expertise in this country, and I do not see us having to be trailblazers in this area. We will be takers of innovation in this sector, and the products simply are not there. As I mentioned, there will be nothing that will meet bankable criteria in the next 15 to 20 years.

The CHAIR: Thank you. Who did I have? I have got next Mrs McArthur, then Ms Terpstra.

**Mrs McARTHUR**: Thank you, Chair, and thank you, Mr Holmes à Court. And as you were watching the previous presenter, I will just repeat, but I will not go into detail, but I am technology agnostic. I think there should be a mix of all forms of energy, and while I know you have been referencing a large nuclear plant in the UK, we are I think particularly more interested in small nuclear reactors here.

But anyway, my first question would be: you say you are an energy transition specialist; could you explain what that means? And I have got numerous questions to follow.

Mr HOLMES à COURT: I am really sorry but my audio just dropped out for about 30 seconds.

**Mrs McARTHUR**: My first question is, Mr Holmes à Court, you say you are an energy transition specialist; could you explain what that means?

Mr HOLMES à COURT: Sure. I study all aspects—social, economic, technical, political aspects—of energy transition, largely in the electricity sector but across the other sectors of the economy.

Mrs McARTHUR: And in some form of academic institution do you study these proposals, these interests?

**Mr HOLMES à COURT**: Yes, I am associated with the Energy Transition Hub at Melbourne University and the Climate and Energy College, and as I mentioned before in my introduction I was inaugural chair of the advisory board for the Melbourne Energy Institute back from 2011 and I have had a deep interest in electricity since I was a child but professional involvement in electricity since about 2003.

Mrs McARTHUR: Okay. So following on from that, Mr Holmes à Court, do you have a commercial interest in renewable energy?

**Mr HOLMES à COURT**: I do not have any employment in renewable energy. Like all Australians who hold investments in, say for instance, their superannuation, I have investments in renewable energy, just to preempt that question. My level of investment in property, mining, financial services, technology, would all exceed that in renewable energy, and my level of investment in renewable energy would be less—if you have normal super, then your level of investment in coal would exceed mine.

Mrs McARTHUR: Were you not the founding chair of Hepburn Wind?

**Mr HOLMES à COURT**: Yes, I was. Hepburn Wind is a community cooperative. It was a voluntary role. I fulfilled that role for eight years. It was a wonderful project. I loved being involved.

The CHAIR: Can I just jump in, because I am not sure these questions are relevant, because we are running out of time. Have you got any more questions, Mrs McArthur, about the reference because I need to go on to the next one? I am sorry to be rude, but we are running out of time. I am happy for you to email all these other questions. Please do, and we could then—

Mrs McARTHUR: Perhaps the final one then, let us go to Mr Holmes à Court's involvement in Climate 200.

The CHAIR: Thank you.

Mr HOLMES à COURT: What is the question there, sorry?

Mrs McARTHUR: What is your involvement in Climate 200?

**Mr HOLMES à COURT**: I was one of the founding members of a group called Climate 200. It is actually based on the Kooyong 200, which is a Liberal fundraising committee. It is a fundraising organisation that I used to be a member of, and not long after I was booted from that foundation I thought, 'Well, I'll help set up something quite similar'.

Mrs McARTHUR: So that pushes for subsidies for renewable energy, doesn't it, Climate 200?

Mr HOLMES à COURT: No, it does not.

Mrs McARTHUR: It is an advocate for subsidies for renewable energy?

Mr HOLMES à COURT: No, it is not.

Mrs McARTHUR: No, it is not?

The CHAIR: Can I ask Ms Terpstra now, your last questioner.

**Ms TERPSTRA**: Thanks, Mr Chair. Thanks, Mr Holmes à Court, for your presentation today. The previous witness talked about—and we have had some questions around this earlier, but can you just unpack this for me a bit: the previous witness talked about that if we were to lift the prohibition on nuclear we would immediately create value by doing that. But I heard you earlier talk about the mounting costs that are experienced in the nuclear sector and the costs overruns and that government would have to subsidise it. That creates a really big risk to the taxpayer of course, because a lot of these projects never see the light of day. You said earlier that

removal would really be symbolic, so could you just unpack that a little bit more for us? The previous witness was really presenting as an economist, and I really struggle to understand what the connection is between this creating value, so if you could unpack that a bit. It seems nonsensical to me, but anyway, I would like to hear from you about that.

**Mr HOLMES à COURT**: I think I understand the basic proposition that if you bring alternatives into a market, the competitive pressure or the threat of competition can have benefits for the consumer. So I get that. For instance, if you had 10 different ways of getting to work—bicycle, car, tram, bus, plane—and I take away one of those, your options are reduced, and under certain circumstances you may be inconvenienced or pay more. If I add a new form of transport, so I now give you a scooter, you have got one more way of getting to work, and that potentially having more options can provide utility to you. Now, in that example, if this inquiry was to be about whether we should make hoverboards legal, I would say it is symbolic whether you want to ban hoverboards or make them legal, because they do not exist. So the option value of adding hoverboards, of legalising them, would do nothing really, I would say—nothing practical—to your transport choices. So we are talking—

## Ms TERPSTRA: Hypothetically, really.

**Mr HOLMES à COURT**: It is hypothetical. If there was a viable option—and by that I mean economically viable, could be built in a short amount of time, popular, so we could work through the political and social issues—if that was on the table, or even remotely near being on the table, then I think that argument from the previous speaker would hold a lot of weight, but that is not the case, so it is symbolic. I do not think that argument can be made.

**Ms TERPSTRA**: We do not have capabilities, as I understand it, to build nuclear in Australia. We would have to look to overseas markets to build it, and so what you are talking about is when there is competition in a marketplace, like you are saying—other options, but we do not have that. And, as you have said, what we are seeing overseas is a lot of these nuclear projects that are being built, some of them are not even seeing the light of day, and the legacy that is getting left is with the taxpayer. So it seems a very risky proposition.

**Mr HOLMES à COURT**: Yes, and the sector is in this awkward transition between the old gigawatt-scale nuclear—too slow and too expensive—and the new small modular reactors currently exist only on paper and are about 20 years from commercialisation. So we are sort of in a no-man's-land between the old and the possibly new.

**The CHAIR**: Thank you. On that note I have got to now cut the hearing short. If members have any further questions to Mr Holmes à Court, please forward them to Mr Baker, the committee manager, and they will be forwarded across, and I will appreciate it if you are able to provide a response. But I would like to take this opportunity, Simon, to thank you for your contribution this morning, now this afternoon, so thank you very much. We appreciate your contribution.

Mr HOLMES à COURT: Thank you very much.

## Witness withdrew.