



**LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL  
TERRITORY**

**STANDING COMMITTEE ON ENVIRONMENT, CLIMATE  
CHANGE AND BIODIVERSITY**

(Reference: [Inquiry into Climate Change and Greenhouse Gas Reduction  
\(Natural Gas Transition\) Amendment Bill 2022](#))

**Members:**

**DR M PATERSON (Chair)  
MS J CLAY (Deputy Chair)  
MR E COCKS**

**PROOF TRANSCRIPT OF EVIDENCE**

**CANBERRA**

**TUESDAY, 13 SEPTEMBER 2022**

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**Acting secretary to the committee:  
Ms K Mickelson (Ph: 620 50199)**

**By authority of the Legislative Assembly for the Australian Capital Territory**

Submissions, answers to questions on notice and other documents, including requests for clarification of the transcript of evidence, relevant to this inquiry that have been authorised for publication by the committee may be obtained from the Legislative Assembly website.

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## **Privilege statement**

The Assembly has authorised the recording, broadcasting and re-broadcasting of these proceedings.

All witnesses making submissions or giving evidence to committees of the Legislative Assembly for the ACT are protected by parliamentary privilege.

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*Amended 20 May 2013*

**The committee met at 9.00 am.**

**RATTENBURY, MR SHANE**, Attorney-General, Minister for Consumer Affairs,  
Minister for Gaming and Minister for Water, Energy and Emissions Reduction

**WRIGHT, MS FIONA**, Executive Group Manager, Climate Change and Energy,  
Environment, Planning and Sustainable Development Directorate

**THE CHAIR:** Good morning, everyone, and welcome. I declare open this public hearing of the Standing Committee on Environment, Climate Change and Biodiversity inquiry into the Climate Change and Greenhouse Gas Reduction (Natural Gas Transition) Amendment Bill 2022. Before we begin, on behalf of the committee, I would like to acknowledge that we meet today on the lands of the Ngunnawal people. We respect their continuing culture and the contribution that they make to the life of this city and this region.

The Assembly referred this inquiry on 4 August 2022, and the committee has received 10 submissions, which are available on the committee's website. Today the committee will hear from two witness groups, the Minister for Water, Energy and Emissions Reduction and officials, and the Suburban Land Agency.

Please be aware that proceedings today are being recorded and transcribed by Hansard and will be published. The proceedings are also being broadcast and webstreamed live.

We will now move to our first witness appearing today, the Minister for Water, Energy and Emissions Reduction, Mr Shane Rattenbury, and ACT government officials. On behalf of the committee, thank you very much for appearing today and for your submission to the inquiry.

I remind witnesses of the protections and obligations afforded by parliamentary privilege and draw your attention to the privilege statement on the table. Can you confirm for the record that you have read and acknowledge the privilege implications of this statement?

**Mr Rattenbury:** Yes, thank you.

**THE CHAIR:** Great. Minister Rattenbury, would you like to make a very brief opening statement?

**Mr Rattenbury:** Sure. Perhaps I can just frame this for the benefit of the committee.

**THE CHAIR:** Yes.

**Mr Rattenbury:** The legislation of itself, I think, is relatively straightforward. It is not especially detailed. It sets up the power for the minister to make a regulation subsequently. But it is obviously nested in a broader government position, which has recently been announced, to ultimately phase out the use of fossil fuel gas in the ACT and to, over the next couple of decades, transition our community from its current significant usage of natural gas, which accounts for around 20 per cent of our greenhouse gas emissions, to cut that over the coming decades.

The purpose of making both this legislation now and the broader policy is to enable an orderly transition over a period of time so that we can move through it in the most cost-effective way and in a way where we can work with the community to get this change done. So this legislation very much is the start of a longer piece of work. That is perhaps the best contextual observation I can offer. I am happy to go to the discussion.

**THE CHAIR:** All right. I will start my first question. The bill specifies:

A gas distributor must not provide a new gas connection for natural gas in an area, or to stated premises in an area ...

Is there any reason why the area or premises is not specified in the bill?

**Mr Rattenbury:** Yes. The clear intent here is that this bill creates the overarching power. The intent is that the specified areas or other details will be put in a regulation that would come subsequent to the passage of the bill and subsequent to a consultation process, which would involve a regulatory impact statement and detailed discussions with the development sector, members of the community and other expert groups.

Our intent is to prevent new gas connections, clearly. That is the intent of the bill. It is not about removing existing gas connections. This is very much about new gas connections. The broad policy intent, as has been flagged publicly, is to stop the rollout of gas into new greenfield suburbs, as we have seen with Ginninderry, which is already developed through a different policy decision but without a gas connection.

It is also to target infill development. What we are particularly looking at there is where we are seeing perhaps a larger scale of infill. There is still work to be done on defining this, but I note that there are submissions about people being concerned about current knockdown rebuilds and the like. Our intent is not to target people who are currently doing a knockdown and rebuild, but to create forward thinking and stop the problem from getting worse. We are seeing around 3,500 or so new fossil fuel gas connections each year in the ACT at the moment. Simply stopping that new set of gas connections means that the ultimate transition away from gas will be easier.

**THE CHAIR:** In terms of impinging on human rights, particularly for the infill with no new gas connection, do you foresee an issue where the regulation may affect people who are in existing suburbs, that it may actually impact their human rights?

**Mr Rattenbury:** No, I do not think so. Obviously, we will examine this as we go through. I think the right that would be asserted is the right to be supplied with reliable energy that meets the needs of a household. I do not think the right goes to the specificity of: "You should be able to have gas; you should be able to have electricity." In broad terms, I think that the obligation the government has is to deliver a secure, reliable energy supply at an affordable price.

**THE CHAIR:** Thank you.

**MS CLAY:** Minister, we have had a bit of concern in the submissions about education.

**Mr Rattenbury:** Yes.

**MS CLAY:** It has come up a few times. I was interested in Alan Pears's reflections on how education needs to be done with a lot more mobile, face-to-face community demonstrations. We have heard a bit of concern from people saying their builders had not heard about this. I do not know if that is an education or a transition issue. There was also a query about whether a lack of education or implementation problems might lead to wood-fired heaters or other negative consequences. What is your plan for those industry transition issues and community education, to make sure that we do not accidentally get the wrong results?

**Mr Rattenbury:** It is a good question, Ms Clay. I think that, right now in the community, there is a full spectrum of where the public is at. We have got those who are already getting off gas themselves as a matter of personal choice, whether that is for environmental or economic or both reasons. So some people have already begun this transition. Others, probably at the other end of the spectrum, have not thought about it at all. Hearing about some of this in the media—and we heard it this morning on the ABC when this was being talked about—some people are saying, “I have literally never heard of this issue.” So we have that full spectrum.

Part of the government's intent in being very clear about announcing this policy now and starting this work is to begin that education campaign, the awareness raising, in the first instance. I think it is fair to say that for a long time in Canberra we were told that gas was a cheap and clean alternative. If you go back two decades, that was true. It was cost effective and it was cleaner, compared to the coal-fired electricity coming out of New South Wales and Victoria.

Gas is simply now another fossil fuel that produces greenhouse gas emissions. We have 100 per cent renewable electricity. So the clean side of it is gone. The cost of gas is going up substantially. But there is a deep community understanding of that message that was pumped out for a long time. So we have definitely got an education piece to do. That is all the context for your actual question.

I guess the job that government needs to do now is to work with industry stakeholders—groups like the Master Plumbers Association and a range of other industry bodies—to work with the technicians and the installers and the suppliers to make sure that when you call out a tradie to say, “I have got to replace my system,” they feel confident explaining to you what the alternatives are.

We need to talk to the community about why this transition has to be made and how to do it, and also put in place financial support for those who are less able to make the changes themselves. The last piece I should add that is a really important part of the education is being clear with people that they have got a bit of time to do this. We are not saying to anybody, “Pull your gas appliance out tomorrow.” The message is: “When your gas appliance reaches the end of its natural life, and it will, replace it with an electric one.” That is part of what we are trying to create as well. I think that is really important. I have heard some say that government wants to pull out your gas appliance tomorrow, and that is definitely not the case.

**MS CLAY:** That is reassuring to hear. Will some of that transition be clearer when we see the regulations and start dates for this?

**Mr Rattenbury:** Yes. In terms of a transition and what this bill does, this bill is preventing new gas connections. The people impacted by this bill will not have to make a transition. It will be like moving to a house in Ginninderry. We know Ginninderry has decided to build as an all-electric suburb. So if you move into Ginninderry today, with a new home, you will never know the difference. You will have an all-electric house that is very efficient and has lower energy costs et cetera. That is what this bill will do. It will mean more houses like those that are being built in Ginninderry. As for people who are on gas now and will have to transition off gas, that is really a separate stream of work—a related but separate stream of work, compared to this bill specifically.

**MS CLAY:** Sure. And the knockdown-rebuild issues?

**Mr Rattenbury:** That is going to need to be part of the consultation. Our initial thinking on this was that we were targeting infill, those larger scale redevelopments. A knockdown rebuild is, I think, a question that sits a little bit in “further work required,” in the sense that the gas connection will still be there for that block, and so there is potentially a choice for the household. They could go all electric and not reconnect gas when they do their knockdown rebuild or they could choose to reconnect gas. We need to have a think about whether we want to incorporate knockdown rebuilds into the regulation or not.

**MS CLAY:** Sure. Thank you.

**MR COCKS:** Minister, it seems, from what you are saying, that the intent of this bill is fundamentally to move Canberra toward full electrification?

**Mr Rattenbury:** Yes.

**MR COCKS:** That being correct, in your justification for this bill, and in your speech, you are essentially arguing for a total gas connection ban. You seem to have dismissed out of hand the potential to use the network for green gas. At the same time, the network provider and the profession seem highly driven to push towards sustainable uses. What information do you have that says that their economic analysis is incorrect and we should not retain the network and the ability to move towards green gases in the future?

**Mr Rattenbury:** The ACT government has considered all of the options, including the possibility of green gases, be that hydrogen or biogas in its various forms. Part of the preparatory work for both this bill and the government’s broader gas policy position has been examining all of those options: examining the cost-effectiveness of them, the feasibility of them and the energy efficiency of them, if you like. That analysis is all publicly available; we publish, as part of our work, the reports that the government has relied on. What that analysis has shown us is that the electrification pathway is the most cost effective. It can be done on technology that is available today and it is the most viable option for Canberra.

That analysis also shows that there are considerable efficiency issues around the use of hydrogen in particular. Analysis has demonstrated that it is more efficient to power our city directly with renewable electricity, rather than using electricity to produce green hydrogen, whether that is produced locally or interstate and transported to the territory. This comes down to an efficiency question. The total pathway efficiency for generating renewable electricity and using it for an air source heat pump is 240 to 380 per cent, whereas the total pathway efficiency for using an electrolyser to generate electricity then combust the hydrogen in a heating appliance is around 68 to 77 per cent. There is a bunch of data in that statement. The essential point is that it takes a lot of electricity to produce hydrogen to then burn the hydrogen. You are better off just using the electricity directly. That is perhaps the most simple way of describing it.

**MR COCKS:** The industry still sees a benefit.

I come back to something you were saying earlier about the move from gas being perceived as the environmentally friendly option, to the state now, where you are telling people that it is not as environmentally friendly as electricity. We are talking about a policy position that is likely to prevent further investment in building those potential future options. It is entirely possible that the equations for efficiency will change in the future and that this decision would essentially put \$400 million worth of infrastructure on the future scrap heap. I am interested in how those future impacts have been modelled. Do you have modelling that you can provide, on notice, around those future impacts and issues like peak electricity demand and how that will be managed?

**Mr Rattenbury:** A couple of things, Mr Cocks. Firstly, what I should have said in answer to your first question is that the government does contemplate that there might be a future role for green gases, in limited application. For example, there might be some industrial applications where the electrical technology is not sufficient for various industrial processes. So we can see the niche application of hydrogen or biogases in particular uses.

The second important point is that this legislation cannot be used to prevent connections for 100 per cent renewable gas. That is very clear in the legislation. So, again, those things are not being precluded. In terms of your specific question about modelling, the government reports are publicly available. I think we provided them to the committee as attachments.

**Ms Wright:** They are on the website.

**Mr Rattenbury:** Yes.

**Ms Wright:** On the public-facing website—all our modelling.

**Mr Rattenbury:** Yes. I thought we provided them as attachments with our submission. If not, I will make sure that they are provided to the committee on notice so that you do not have to go searching the web for them.

**MR COCKS:** Thank you.



**THE CHAIR:** I have a supplementary to Mr Cocks's question. The Conservation Council argues the opposite: going further and explicitly banning hydrogen in the bill. Is there a reason why that is not explicit?

**Mr Rattenbury:** As I said in answer to Mr Cocks's question, there is still a sense that there could be a niche application for a particular geographical area. For example, Fyshwick, as an industrial area, might have a smaller scale hydrogen network for particular sites and locations. That is why it is not explicitly excluded at this point in time. It is envisaging possible future development.

**THE CHAIR:** In that sense, though, because the bill outlines that the ban will be in an area or a stated premises in an area, you have kind of already got that covered—that you will specify where the particular bans on connections will be. Using that argument, can't you put hydrogen explicitly into the legislation?

**Mr Rattenbury:** To include it or preclude it?

**THE CHAIR:** To ban it, yes.

**Mr Rattenbury:** We do not see the case, at this point, for banning the use of hydrogen.

**THE CHAIR:** Okay.

**Mr Rattenbury:** As I said—and I think it would be fair to say that there is not a definitive view on this yet—broadly, we see the possibility that hydrogen could play those niche roles, so we do not see the case for banning it at this point in time.

**THE CHAIR:** Okay. ACTCOSS have been very consistent in their advocacy for a just transition. I am interested to hear from you how this will be managed. In their submission they say that this should be considered as a priority in the policy, going forward—how we transition the most vulnerable in our community.

**Mr Rattenbury:** ACTCOSS is absolutely right to focus on these matters. I think it is an incredibly important part of the broader transition. Again, my view is this specific bill does not impact that, in the sense that this simply stops the problem from becoming worse. But, clearly, as part of the broader transition we need to be very mindful of assisting lower income households and vulnerable households to work their way through this transition.

There are a range of measures being put in place to do that now. For example, the government has the \$50 million commitment in the Home Energy Support Program, which is particularly targeted at lower income and government housing households. That is being rolled out. What we are seeing is the electrification of, in the first instance, government housing properties, which will help those tenants to reduce their energy bills, as well as deal with the environmental side of gas.

Similarly, we are starting to develop programs for non-government households. There are programs like the Sustainable Household Scheme, where you can get an interest-free loan to replace your gas appliance with an electric appliance. So there are

a range of measures already being put in place. Those efforts will need to be ramped up over the coming decade or so, as we work through the transition. The government's primary responsibility is to set the broad policy. I think the government also has to have a particular emphasis on helping the most vulnerable households.

**THE CHAIR:** I cannot remember the exact figures, but during estimates we heard from the Chief Minister about the Sustainable Household Scheme, where a large number of the loans had been for rooftop solar. There were not a huge number that had transitioned from gas to electric appliances. They did exist, but not a huge number. Do you look at that as a measure of this being quite a challenging transition? How would you view what is happening already?

**Mr Rattenbury:** I would interpret that as a reflection of where the community is at, in the sense that they understand solar, they have confidence in it and they know it is the future. There is a good environmental and economic case to install solar on your house, and there are a lot more solar installers. I think the community has embraced that.

With the gas transition, we are at an earlier point. We are probably where solar was 10 years ago, where people were starting to think about it and the early adopters were going there but the bulk of the community were not. I think that just reflects the state of community understanding. That is why this policy is designed to occur over the next decade or two—because we think that is the time it will take to build that critical mass that you are reflecting is already in the solar space.

**THE CHAIR:** Thank you.

**MS CLAY:** Minister, there have been a few concerns raised about e-waste. I think this is coming up in the context of people who are concerned about the environmental impacts of transitioning off fossil fuel gas. They are concerned about lithium mining and the recycling of batteries as we move to a new technology. The concern is coming from all sides of this conversation, which is fascinating. I am wondering what your views are on how we are doing with our circular economy on some of the new technologies, such as solar panels and batteries, to make sure that we are recycling them and not creating an environmental problem with the waste, and also that we are re-using those renewable resources so that we do not need to mine more of them in difficult circumstances.

**Mr Rattenbury:** I will pick up on the theme I was talking to Dr Paterson about. I think we are in the infancy of our circular economy. It is underdeveloped. It is clear, with the emergence of some of these technologies, that we will need to build recycling industries to ensure that we retain these really valuable natural resources.

I know you have led a discussion in the Assembly on the recycling of solar panels. I think that will come to the fore first, because solar panels generally have a 20- to 30-year life on them and for many of the early adopters we are starting to get towards the end of that 20- or 30-year cycle. In the next decade I think we will see a bit of an expenditure curve on the demand for recycling of solar panels. I think batteries will follow behind that. Clearly, these are areas that we need to further develop. I know that Minister Steel is starting to think about this work, but it requires

further development.

**MS CLAY:** Do you think that is likely to end up in recycling in Australia? Do you think there are national opportunities here for us to do that work?

**Mr Rattenbury:** I think so. In the context of the disruption of the supply chain that we are seeing at the moment, there needs to be a strategic consideration of: of how do we do it? Look at the sorts of policies we have seen come out of China. They are not accepting people's waste as much as they used to. The job creation opportunities in Australia, I think, are all very significant. I would like to see this done in Australia. I think it is incumbent upon governments, not just the ACT but all of us, to work together to create those opportunities and ensure that it happens here.

**MS CLAY:** Thank you.

**MR COCKS:** I am conscious of time. I might see if I can put a couple of things through on notice.

**Mr Rattenbury:** Sure. I will try and be more succinct.

**MR COCKS:** That is all right. I want to come back to the issue of choice. You indicated just now that it will take a decade or two for the implementation of this policy. But the effect of it is that, as soon as the regulations come in, consumers will not have a choice as to what their energy usage is. The government's position seems to be that you know better than consumers. You have talked about the community not being ready and drawn the comparison with solar. It occurs to me that the government did not ban other forms of electrical connection when solar emerged. Why are you moving to a ban, rather than other educational approaches? What options have you considered that do not involve taking that choice away from people?

**Mr Rattenbury:** At its most simple, we are in a climate crisis. Fossil fuel gas is a significant source of greenhouse gas emissions, both in production and usage, and we need to phase it out. That is the scientific bottom line that is driving this policy. That is the primary driver. There is no option that we considered where we just keep using gas. We do not have the time and we do not have the carbon budget left to have a free-for-all in gas.

The government is seeking to do this in an orderly way, to give the community as much time as possible to transition. Your point that, once this legislation passes and the regulation is put in place, new households will not build with gas is true. But it is really important to draw that distinction. If you are sitting in an older suburb, in the middle of Weston Creek, for example, which has an existing gas network, this legislation will not turn that gas off overnight.

**MR COCKS:** So you do not intend to have the gas ban impact older areas?

**Mr Rattenbury:** Over the next decade or two it is our intent that fossil fuel gas will no longer flow in the ACT. But for people who are sitting there, say, in Weston Creek today, where they have had gas for quite a while, this legislation will not turn that gas supply off overnight.

**MR COCKS:** But it would apply to any new development occurring in Weston Creek?

**Mr Rattenbury:** That is still to be determined under regulation. We discussed earlier the question of knockdown rebuilds. That is an area that will need to be developed through the regulation.

**MR COCKS:** For example, if a significant development were proposed to occur in Weston, a multi-unit development, you would not be intending these regulations to impact clients in there?

**Mr Rattenbury:** That is the work to be done through the regulation process. What we see in particular in larger developments is that it becomes difficult for the individual unit owner. If the whole complex is being built premised on gas, their choice to get off gas is constrained. The way the building is put together, it is often very expensive to then try and retrofit the gas out later. So it makes economic sense for the government to drive that leadership at the moment, to make sure that people are not having gas infrastructure built in that will be difficult and costly to remove later.

**MR COCKS:** But to the point, that development, the people investing in that will not have the choice to connect gas?

**Mr Rattenbury:** Yes, that is the policy intent.

**MS CLAY:** I wonder, Minister, if you could outline some of the choices that we have of different types of electricity going into the grid and the different types of ways that developments can be built without gas, like passive and electricity and solar? Is there a bit of choice involved in that?

**Mr Rattenbury:** Absolutely. Picking up on that point, with the change of energy efficiency standards that have just gone through the Building Code, it is a minimum of seven stars. I think it is a good point that this does not happen in isolation. One of the key advantages of this approach is that we can reduce the energy bills of households through more efficient design, better design and electrification, where the devices are more efficient and you only have one connection to your household. Right now many households pay two connection fees: one for gas and one for electricity.

The simple act of moving to electrification cuts out one of those fees to start with. Put on top of that the fact that modern electrical devices are far more efficient and we are giving people a real pathway to lower energy bills. I think that is really important for protecting households against cost-of-living pressures whilst also delivering important environmental outcomes.

**THE CHAIR:** Thank you, Minister. On behalf of the committee, I would like to thank you and officials for appearing today. When available, a proof transcript will be forwarded to witnesses to provide an opportunity to check the transcript and identify any errors. I do not think there were any questions on notice. Thank you very much.

**Short suspension.**

**THORMAN, MR ROB**, Project Manager, Sustainability and Release Coordination,  
Suburban Land Agency

**LEE, MR JOEY**, Acting Deputy Chief Executive Officer, Suburban Land Agency

**AHUJA, MR ESHAN**, Senior Project Manager, Sustainability and Release  
Coordination, Suburban Land Agency

**THE CHAIR:** We will move to the next witnesses, Mr Thorman, Mr Lee and Mr Ahuja, appearing from the Suburban Land Agency. On behalf of the committee, thank you very much for appearing today. I remind witnesses of the protections and obligations afforded by parliamentary privilege and draw your attention to the privilege statement before you on the table. Could you please confirm for the record that you understand the privilege implications of this statement.

**Mr Thorman:** Yes.

**Mr Lee:** I am familiar and acknowledge it.

**Mr Ahuja:** Yes.

**THE CHAIR:** Great. Mr Lee, would you like to give a couple of minutes of an opening statement to the committee?

**Mr Lee:** Yes. That would be great.

**THE CHAIR:** Fantastic. Thank you.

**Mr Lee:** First and foremost, I would like to thank you, Dr Paterson and the committee, for the invitation to contribute to this inquiry. As the government's land development and delivery agency, we feel that we are well placed to support the work of this committee. As you may already be aware, at the Suburban Land Agency we seek to go beyond just delivering land and selling land. We really strive to develop vibrant places and thriving communities.

One of the ways that we seek to achieve this is by balancing economic, environmental and social outcomes. To do this, we are very much guided by the policy context that exists within government. That includes: the greenhouse gas reduction targets set out in the Climate Change and Greenhouse Gas Reduction Act 2010; the goal to shift from gas to electricity, per the ACT Climate Strategy 2019-25; and the commitment to phase out fossil fuel gas in the ACT, per the parliamentary and governing agreement.

The specific commitments from this last agreement relate directly to the work that we do as an agency. That covers the Molonglo commercial centre being developed as an all-electric commercial centre, the prevention of new gas mains network connections to the future greenfield stages in Jacka and Whitlam, and commencing work on all-electric infill developments.

To capture all of the requirements, commitments and goals of government we have developed the Suburban Land Agency Sustainability Strategy 2021-25. This provides

our stakeholders with a single reference point. It brings together the broader government policy context, the expectations of our minister, the Minister for Housing and Suburban Development, and the sustainability ambitions of our agency and our governing board. One of the core themes of our strategy is delivering zero emission suburbs. Within that theme is a key priority to promote all-electric homes and precincts. We recognise the importance of this bill in facilitating this key priority.

In relation to all-electric precincts, we have been on this journey for some time, since 2018, when the Estate Development Code was amended to trial the first all-electric suburb, out in Ginninderry. This was followed up with Whitlam stages 1 and 2, where we offered an incentive program to transition away from gas and build an all-electric home in return for an energy rebate.

Future stages of Whitlam have now been designed with no reticulated gas mains network connections. Jacka stage 2, which is about to go into construction, has also been designed with no reticulated gas mains network connection. In Jacka we are exploring further opportunities related to energy system requirements and the possibility of delivering a community-scale battery solution, in alignment with the Big Canberra Battery initiative.

Finally, recent urban infill sites that we have sold include specific requirements for no gas connections and the provision of EV charging. That includes sales in Turner and Belconnen. That really forms the template for infill sales, moving forward.

As you can see, the work that we do at the Suburban Land Agency is really underpinned by the government's policy agency. Therefore, we see this bill as a critical step in ensuring that all-electric greenfield estates and urban infill developments can continue, going forward. I have got my team here with me, who specifically work in sustainability. We are more than happy to answer any questions that you may have.

**THE CHAIR:** Thank you very much. I will go first. You said that with Whitlam you had the first two stages, where you offered an incentive. What was the uptake of that incentive and what was the incentive?

**Mr Lee:** The uptake is something that we will continue to monitor. It is still early days. A lot of the residents are still in the process of building. The incentive is a \$10,000 rebate, in addition to whole-of-life savings that we expect from switching from gas to all-electric and having a solar-powered home. We estimate those savings to be in the order of \$18,000 over a 10-year horizon. We are still monitoring. We do not have those figures at this stage, but we expect to gather that information as the suburb develops.

**THE CHAIR:** When people put in their development applications is there no discussion at all, or does the government not collect any data, on whether there are any plans for gas?

**Mr Lee:** The Whitlam energy rebate is something that is administered by the Suburban Land Agency. In terms of the collection of data, I will pass to Mr Thorman.

**Mr Thorman:** It is not until people have completed and have got evidence. We have this eligibility guideline. It goes through the five things that you need to do to get the rebate. There is a great little graphic here. To get your \$10,000 you need to go all-electric; you do not connect to gas. In Whitlam stages 1 and 2 it was still a legal requirement for us to put gas in. That was lifted, so we are not putting gas into stages 3 and 4. You need to put a minimum amount of solar PV on the roof, have an EV charging provision, all-electric heating and cooling, and electric hot water. We have also made provision for a light-coloured roof, which is not directly an energy issue; it is more about the albino effect and the absorption of heat—the heat island effect.

You do all of those things and gather the evidence. This booklet goes through it and has forms in there to fill in to provide the evidence that you have actually engaged the builder to put in the EV charging point and you have got the receipts for all of the appliances. It is not until the house is completed that people can provide the evidence. If you have been out to Whitlam you will know that some people have started to move in, but it is really a lot of houses under construction at the moment. We have had a handful of people putting in their applications already. I have not got the precise figure. We can certainly find that out. It is fewer than 20, certainly, at the moment, but we expect that to increase.

**THE CHAIR:** I am sure the government has budgeted for this. What was the prediction of home owners that would apply for this scheme?

**Mr Thorman:** It was difficult to say, but we thought maybe 50 per cent would. We have done some survey questions, and we will be doing more work to understand what people's reservations might be about signing up. It might be: "I definitely do not want a light-coloured roof. I want a black roof." It is a fashion thing. Or is it: "I want to have gas cooking"? We have a diverse range of people buying into our estates—a lot of people from Asia and the subcontinent—and it is seen as a cultural issue to be able to cook with gas.

Ginninderry has certainly done some great work in having celebrity chefs, Indian chefs and Chinese chefs, do demonstrations on induction cooking. In the work that we did looking into a gas-free commercial centre, one of the key obstacles we identified would have been around restaurants. With the green star program, they require gas-free commercial centres. So there is now a whole industry around it, and technology is moving quite quickly in terms of all-electric kitchens, cooking and commercial kitchens.

**Mr Ahuja:** We use the certificate of occupancy as one of the final documents. When your house is ready, you need to provide that as one of the first things. Then there is evidence for each energy system requirement to be included—whether it is a certified electrician's signature, with their licence number and other aspects—to show us the evidence that all the energy equivalents are in place and compliant to the requirements as per the Australian standards.

**MS CLAY:** Just briefly on the gas cooking: I understand that there are quite a lot of options. There is induction and induction woks and various things. Also, I understand that if people do not want to be connected to gas but, for whatever reason, they desperately want to cook with gas, they can use a gas bottle. Has that been

your experience?

**Mr Thorman:** I understand that that is what has happened with a few houses out at Ginninderry. People have not connected to the mains. They have elected to have gas cylinders in their alfresco kitchen areas. I understand that there are a few of those. I do not know how many, but that is an option. That would also be an option in the commercial setting. If people are absolutely insistent that they need gas for particular types of cooking, they can always elect to do that—have bottled gas or gas delivered as a transition.

**MR COCKS:** Do you have any view of the comparative safety issues around gas bottles versus mains connections in a housing development?

**Mr Thorman:** Not offhand, no. I would have to provide information on that on notice.

**MR COCKS:** Any analysis that you have got would be useful.

**Mr Thorman:** Yes.

**MS CLAY:** I am just wondering, now that you have had quite a lot of experience with all-electric in infill and in greenfields: what are the benefits when we are no longer laying pipes? Are there benefits economically or are there benefits in terms of the development footprint if we do not need to put in the pipes in the first place?

**Mr Lee:** Yes, I think there are definitely savings attributable to not having those connections in place. The benefits flow through to the consumers, as I have alluded to previously. Rob, do you want to expand on that?

**Mr Thorman:** Yes. It is one less service, one less piece of infrastructure that has to be put into the suburbs. In the scheme of things that is a minor saving, but it is less infrastructure. I think it is also the case within individual buildings that there is less duplication of infrastructure. Eshan, have you got any comments on that one?

**Mr Ahuja:** Sure. The first thing, as mentioned, is the supply charges that you will obviously not be paying if there is no existing network infrastructure in terms of the gas supply. At the same time, it is more about the ecosystem that electrification can create. That is what the intent was for the energy rebates, for example. We are talking about energy efficient appliances, solar systems, battery storage options and considerations, which is also the case, as Joey mentioned, for Jacka stage 2. We are continuing to investigate the possibility for Jacka of community-scale batteries.

These are all the options that become part of that ecosystem, to provide us with a transition and to try to manage those peaks, which obviously can create more negative economic impact in terms of the overall customer charges. They are the considerations. That is what we think is going to be assisting in terms of putting downward pressure on electricity prices.

**MS CLAY:** Have you seen or used education to talk about any health benefits that may come from not having methane in your house and having electricity in your house instead?



**Mr Thorman:** We have not done research on that. But, yes, we have read a lot of the literature. It is a significant issue—the unburnt elements—so there are certainly health benefits. We did a little bit of work in the report that we did on the gas-free commercial centre. One of my colleagues is going to follow that up. And the number is three—the uptake so far of the rebate.

**THE CHAIR:** Great. Thank you.

**MS CLAY:** Thanks.

**MR COCKS:** You mentioned that you expected the infrastructure saving to flow on to consumers. But it would seem to me that the direct saving from not installing that gas infrastructure in the first place, would sit with the suburb developer. Would that be incorrect?

**Mr Thorman:** Yes. In the scheme of things it is not a huge issue. The direct question was: are there some savings? Yes, there would be some savings. In the price of the block of land at the end, in fact, it would be very much at the margins.

**MR COCKS:** Okay. It does seem that in a competitive market for land that is likely to largely disappear, but be that as it may. I am really interested to learn about the stage at which the decision would be made for an individual household to connect to gas, prior to these regulations coming in. From the stage where the infrastructure is going into the ground, at what point is the decision for an individual house or household made?

**Mr Thorman:** I am not quite sure I follow your question.

**MR COCKS:** My understanding is that this legislation would provide the minister with the ability to say that, for any area, the infrastructure cannot be put in to connect gas to a house. However, I am interested in the stage at which the decision for an individual house, in the existing circumstances, is made. Do you have visibility of when people are choosing to connect to gas?

**Mr Thorman:** Not really. We are the land developer. We sell the land to an individual. It is then their choice, and they go through the usual planning rules to build the house. Regarding those individual choices, the materials they use, we do not have visibility of that. Perhaps the planning directorate may have. I guess our closest insight is through the Whitlam rebate, because we are actually then getting an indication of how many people are making that choice. We are doing some survey work around motivations, to follow it up.

**MR COCKS:** But it sounds like that is very early in the piece at the moment and there is not much data to base that on?

**Mr Thorman:** Yes; that is right. As we were just saying, if you have a look around Whitlam, mostly it is houses under construction.

**MR COCKS:** Yes. You said that three had taken it up?

**Mr Thorman:** So far three people have completed their houses and submitted all the documentation to us.

**MR COCKS:** And you do not have a sense of how many have been completed and moved into Whitlam that have not chosen to take that up?

**Mr Thorman:** Not offhand. I am not sure if we have data on completions and people actually having moved in.

**Mr Lee:** As an indication, though, I mentioned the Ginninderry estate. The Estate Development Code was updated to trial the first all-electric suburb. Evoenergy, I understand, still provided the gas infrastructure. Our understanding is that no-one has actually connected into that infrastructure. There are instances where people are opting to use gas bottles, but no-one has elected to actually connect to the network.

**MR COCKS:** Thank you.

**Mr Thorman:** Just anecdotally, there has been a trend of people in established suburbs making the decision, like I have done, to remove one set of bills. I have disconnected from the gas and switched to electric. So that has been a trend. That is a more difficult decision. You wait until the infrastructure that you have in the house has become obsolete and make that change. Where people are starting from first principles, there has been a shift away from installing gas at the outset over the last few years.

**MR COCKS:** Do you have data around that?

**Mr Thorman:** It is all the advice, all the economics, all the safety issues around health and people's concerns about greenhouse gas emissions. If you speak to any energy advisory service, that is the advice that they are giving: "Put an electric heat pump in. Do not put in gas heating."

**MR COCKS:** Yes, but in that response you are not relying on a specific piece of analysis you have seen. It is more anecdotal: "This is what we are hearing."

**Mr Thorman:** No; it is a trend. It is a clear trend.

**THE CHAIR:** I have a question in respect to the infill developments. For example, the SLA has a very large block in Woden town centre, and I imagine that eventually that will be sold to become a 13-storey building or something of that height. Are there specific issues for all-electric developments of apartments that high or is it the same situation as for a house in suburbia?

**Mr Thorman:** That is a very good question. In our most recent releases of urban infill sites we have put in the deeds that the developer should not connect to gas—we have taken our cue from the ACT government policy—and also should include an EV, electric vehicle, charging provision. In reality, the enforceability of those clauses that we are putting into the deeds is in question. It could be challenged by the developer. But what we have done is the most powerful thing we can do at this point, in this

transition period, to signify that this is the intent. This is in line with government policy.

The last several multi-unit blocks we released with those clauses. That is becoming a standard. We are waiting for the regulations to catch up with that, so that it becomes standard across all developments. It is important to remember that, with the release of land for infill developments, we are responsible for only a small proportion of that. With a lot of the developments that are happening, a developer will buy the land privately. We looked at the issue and we said, “We can put this in our development clauses, but it would be better if there was a whole-of-ACT approach,” which is happening. But it takes time for the regulation to catch up.

**THE CHAIR:** So there are not any unique issues to multistorey buildings being electric, as opposed to gas?

**Mr Ahuja:** Not that we have heard mentioned yet. We have had discussions with the developers, and I note that we have been having ongoing discussions with Evoenergy on the energy load modelling considerations. Regarding the clauses that Rob just mentioned, we have been having discussions with Evo on those considerations and what will be required to smartly manage the load on site to be capable enough to not create any issues—that is, voltage or current or any other considerations.

With the electric vehicle charging requirements, and the infrastructure overall, we have been requesting options for the centralised data load management aspects, to ensure that there are no issues at a later stage or throttle points in the infrastructure that would create any issues for the grid itself. That is aligned with one of our objectives of improving the grid reliability when we talk about these all-electric initiatives that we are trying to come up with.

**Mr Thorman:** It is important to look at the technology that is changing. In terms of the choices you were talking about the other day, we used to look at gas heating as an efficient way of space heating. Now the best system is a split system, which does both heating and cooling. Developers are choosing to go down that pathway anyway. For hot water, heat pumps are becoming increasingly competitive against gas, but in apartments they do take up quite a lot of space, so we are getting instantaneous electric hot water heating, which does create issues for the energy grid. In the transition, these are some of the issues that need to be addressed. But what we have found is that developers are often choosing not to connect to gas anyway in residential settings, because it is one less set of infrastructure, one less set of billing for the ultimate customers.

**THE CHAIR:** So you would see it as a priority in terms of the regulations coming in for new infill large-scale development—that this is prioritised in regulation?

**Mr Thorman:** Yes. We are not the experts in this matter. The first question to ask if we are requiring EV charging is: “What are the technical specifications? How many?” It is not our role. After we have sold the land for a developer to build a building, it might take several years for the building to be completed. Usually we are well out of the picture. We are not a compliance authority that goes back to check whether it was done. It would be better if that was done ACT-wide for all developments, whether it is

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land that we have sold or whether a private developer has bought it on the private market.

**THE CHAIR:** On behalf of the committee, I would like to thank you all for appearing before us today. When available, a proof transcript will be forwarded to witnesses to check the transcript for any errors. I think you took one question on notice; is that right?

**Mr Thorman:** The issue of safety—

**MR COCKS:** Yes.

**THE CHAIR:** Yes, with the gas bottles.

**Mr Thorman:** It is not our core business, but we will certainly find out. One of my colleagues said that the research that we did in the Molonglo commercial centre did highlight or raise the issue.

**MR COCKS:** Any information you have would be really useful.

**THE CHAIR:** That would be great. If you could get that to us within one week of today that would be fantastic. The hearing is now adjourned. Thank you very much for your time this morning.

**The committee adjourned at 10.01 am.**