



**LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL
TERRITORY**

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

(Reference: [Inquiry into Annual and Financial Reports 2021-2022](#))

Members:

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

TRANSCRIPT OF EVIDENCE

CANBERRA

MONDAY, 7 NOVEMBER 2022

**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.

APPEARANCES

Chief Minister, Treasury and Economic Development Directorate	47, 77
Environment, Planning and Sustainable Development Directorate	47

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Amended 20 May 2013

The committee met at 1.00 pm.

Appearances:

Rattenbury, Mr Shane, Attorney-General, Minister for Consumer Affairs, Minister for Gaming and Minister for Water, Energy and Emissions Reduction

Environment, Planning and Sustainable Development Directorate

Ponton, Mr Ben, Director-General

Ogden, Dr Ralph, Program Manager, Healthy Waterways Project, Environment, Heritage and Water

Corrigan, Mr Jim, Deputy Director-General, Environment, Water and Emissions Reduction

Malouf, Ms Ros, Senior Director, Climate Change and Energy

Wright, Ms Fiona, Executive Group Manager, Climate Change and Energy

Burkevics, Mr Bren, Executive Group Manager, Environment, Heritage and Water

Breen, Mr Ryan, Director, Water Policy, Environment, Heritage and Water,

Glennon, Mr Chris, Senior Director, Resilient Landscapes, Environment Heritage and Water

Magee, Ms Alex, Executive Branch Manager, Communications

Chief Minister, Treasury and Economic Development Directorate

Wild-River, Dr Su, Senior Director, Environment Protection Authority

THE CHAIR: I welcome you to the public hearings of the Standing Committee on Environment, Climate Change and Biodiversity's inquiry into annual and financial reports 2021-22. The proceedings today will examine the annual reports for the Environment, Planning and Sustainable Development Directorate and the Chief Minister, Treasury and Economic Development Directorate. Before we begin, on behalf of the committee I would like to acknowledge that we meet today on the lands of the Ngunnawal people and pay respect to their continuing culture and contribution that they make to the life of this city and this region.

There are a few housekeeping matters. Please make sure that all your mobile phones are switched to silent. Witnesses are to speak one at a time and will need to speak directly into the microphone. The first time witnesses speak, they will need to state their name and the capacity in which they first appear. Please be aware that proceedings today are being recorded and transcribed by Hansard, and will be published. The proceedings are also being broadcast and web streamed live. When taking a question on notice, please articulate that clearly for Hansard.

In our first session today, we welcome the Minister for Water, Energy and Emissions Reduction and Minister for Gaming, Mr Shane Rattenbury MLA. Welcome, Mr Rattenbury and officials to our hearing today. I remind you of the protections and obligations afforded by parliamentary privilege and draw your attention to the privilege statement. If you could acknowledge that when you first speak that would be great.

We will get started with today's questions. My first question, Minister, is in relation to the community clubs program and energy efficiency. I see that online there is a form now for extreme weather plans, and I take it that this is in preparation for the support of clubs becoming smoke and heat refuges. I am interested to understand what this process is and what you are asking for clubs to fill out in that form.

Mr Rattenbury: Sure. I will start in the broad, and we will work through what you want to get to specifically. We have obviously indicated a plan to have clubs operate as heat and smoke refuges in those extreme moments, working on the premise that vulnerable people in the community do not necessarily have somewhere else to go during events, and knowing that clubs are often quite large places but are also in neighbourhoods where people feel most comfortable. We see an opportunity to partner with those venues and to work with them to have the right equipment so that they have clean air and it is cool inside and those sort of things. But on the other side, we need to work closely with them to be mindful of issues around access, particularly to alcohol and gaming. That is the broad partnership that we are working towards. On the specifics of the form, I can ask someone to help with that if you want to go to the specifics.

THE CHAIR: Yes; that would be great.

Mr Rattenbury: I am looking for Ros Malouf.

Ms Malouf: I have read and understood the privilege statement. The community clubs program requires clubs, when they submit their application to participate in the program, to provide what they believe to be a smoke and heat refuge plan that would be suitable for their individual sites. We came to that arrangement after consultation with clubs before the program actually started. The clubs told us that they do a lot of this work, anyway, in times of extreme heat; it is just not formalised. So what we have asked them to do to participate in this program and get the energy assessment, and also the rebate eventually, is to submit what they believe to be a smoke and heat plan.

All of those plans are then sent to our colleagues in JACS, who will culminate those together and have a plan of what those smoke and heat refuges will be as they are working on that, with the information from clubs. So 19 clubs have been assessed so far, and we have received 19 smoke and heat plans.

THE CHAIR: In the program about the community clubs program, it identifies categories of electrical generation—like rooftop solar, energy batteries—and heat pumps, cooling systems and that sort of stuff, but it does not mention air filtration systems in terms of products offered under the program. I am wondering how many clubs are going to be seeking air filtration systems through their venues.

Mr Rattenbury: Just to be clear, there are two streams of work running. One is the energy efficiency program for venues, which goes to a lot of those points you have just touched on. To be a heat and smoke refuge, they do not have to come together. They can come together but they do not have to be together.

Ms Malouf: A lot of clubs asked us exactly that question. It falls under that heating, cooling and ventilation component, so filtration has been picked up, and each club

that is looking to upgrade their heating, ventilation and air conditioning will also have advice on the filtration components. Clubs, by their very nature, are quite draughty, because they are big, open spaces. There is advice given on how they can potentially keep that heat out in the summertime, and potentially smoke, should that be the case. It is a really difficult one to solve, the smoke one, though.

THE CHAIR: Will all of this be subsidised under the building energy efficiency upgrade or will there be further funds allocated for this, if a venue wants to become a smoke and heat refuge?

Mr Rattenbury: We have allocated \$5 million under the energy efficiency program. At the moment we have funds left in the program, so that is fine.

THE CHAIR: What is the process in terms of the next dates, when these clubs have come out with their assessments? Is it up to the government to assess whether they are suitable as a smoke and heat refuge?

Ms Malouf: That will be determined when we work with our JACS colleagues; we will amalgamate all of that information. It has happened very quickly. We have received those 19 plans over the last couple of months. That needs to be pulled together a little bit further, and we will see what we can devise as a standard plan.

Mr Rattenbury: There is an overlay that goes into general emergency planning—working with the Emergency Services Agency and ACT Health. Various agencies have responsibility for the activation of certain emergency plans. There is some work now being led. That side of it is led more by JACS, whereas EPSDD has been doing the physical infrastructure work. With that coordination work, as to how an emergency is declared, who communicates it and how the venues are stood up in that context, that is the detail that is now being worked through.

THE CHAIR: I have had different stakeholders raise this as a concern, and I have also raised it in the briefing as a concern—the fact that, with gambling and alcohol services, it is intended that they will be allowed to continue to run while these venues are government-endorsed smoke and heat refuges. From everything we know about public health and emergency situations, serving alcohol and gambling products in times of extreme stress and vulnerability in the community is highly problematic. What will the government do to address that problem?

Mr Rattenbury: We are seeking to work with each venue to make sure that there is a good separation between the refuge location and the alcohol and gambling opportunities, if you want to put it that way—alcohol and gambling services. It is a weigh-up. We know that more people in Australia have died from heatwaves than from all other natural disasters combined. We know there are people in our community who are particularly vulnerable to those risks. We are trying to get that balance right between making sure there is an option for people, so that they do not just sit at home and suffer in the heat, and providing those places of refuge that are readily available and that exist right now.

The bottom line is that people could still go to those venues, anyway, and they will probably still do so informally. We are formalising it, and we need to work to mitigate

that risk. That is something that government is very conscious of.

THE CHAIR: I would put it to you that we have libraries, schools, halls and community centres that could act as smoke and heat refuges, even if they do not have the air filtration systems; government could invest in those facilities and put them in. In the current situation, people may go to a club during a time of great heat or smoke; it is their own choice, and they are making that informed decision to go there. Again, I question why we are not sending people to government facilities that do not sell alcohol or gambling products.

Mr Rattenbury: Yes, that is a view that you can hold. The reality is that, in the case of a large-scale event, we will need a lot of spaces. Those government venues have been used in the past, and will continue to be used, so that people will have a choice. Those government facilities generally do not have catering capability, for example. There are different strengths and weaknesses with each type of venue. We are looking to make sure that our community is protected as well as possible during these extreme events.

MS CLAY: Minister, emissions reduction is a funny field. We have a lot happening globally. We have COP27 going on at the moment. We have a lot of national calls; then we have local and state actions. I want to check in on some national calls being made at the moment, to see how we are tracking against those here in the ACT.

Mr Rattenbury: Sure.

MS CLAY: I have been chatting to Australian Parents for Climate Action, which is a network of 17,000. They have put out a new paper with six specific calls to action. I know that five of them were in your field. If I run through these, can you let me know where we are up to, here in the ACT, on these calls?

Mr Rattenbury: Sure.

MS CLAY: Their first call is that they would like governments to provide rebates for household clean energy technologies. How are we going on that one?

Mr Rattenbury: The Chief Minister would happily talk to you at length about that one, with the Sustainable Household Scheme. That has quite a broad range of products in it, as I am sure my colleagues have seen. There is ongoing consideration of the addition of further products. At the moment it includes solar panels, electric heat pumps and electric stoves. It allows people to both get the devices and to move from gas to electricity. That one is pretty well covered. If there are gaps in the scheme, the Chief Minister and I would be happy to hear from you, if you get any constituent feedback.

MS CLAY: I will check with Nick from Australian Parents for Climate Action. With the next one, they have a call here to support a rapid transition to enable 100 per cent renewable stationary energy by 2030, including transmission upgrades and necessary firming.

Mr Rattenbury: Again, I would say that we are pretty much on track. Obviously, the

100 per cent renewable electricity target—and there is always that important distinction between electricity and energy—is met, as is well known. In terms of other forms of stationary energy, grid upgrade and firming, the big battery project, which, again, sits with the Chief Minister, is certainly stepping quite strongly into that space, from a government-led point of view.

There are also private battery projects emerging in the city. Certainly, Neoen, for example, with the battery that they were signed up to provide, under the last large-scale reverse auction, were asked to provide at least 50 megawatts, if I remember correctly, and they have gone well beyond that. They are going to a couple of hundred megawatts. We are seeing those private battery projects, as well as the government-led ones, proceeding on a bigger scale than was perhaps originally envisaged. I think that is very promising.

In terms of transmission issues, certainly, in my role on the national energy ministers council, we are working in partnership with other state and territory governments and the federal government to accelerate the upgrade of the transmission network across the country. There is a clear recognition that, with more intermittent energy supplies, which is what we are moving to, we need the ability to both firm it and move the energy around.

MS CLAY: I have been through a few energy inquiries, and there is always a concern about reliability. Do you have concerns about ACT reliability at the moment?

Mr Rattenbury: I do not. Right now, the ACT has an incredibly high reliability measure. It is well north of 99 per cent. I cannot remember the exact figure; I am happy to provide it on notice. That is the performance standard that Evo currently delivers. That is the day-to-day reliability—not getting blackouts on a regular basis, and getting the service back up quickly.

In terms of the more macro question of reliability, as the grid changes, there is a recognition that there are risk points in the coming decade, with the early closure of coal-fired power stations, how quickly replacement energy can be rolled out and how quickly the transition network can be upgraded to match it. I think there are risk points in the next decade. There is a clear focus amongst energy ministers that that is a problem we have to address.

MS CLAY: The third call they have is to ban gas connections for new homes and new gas appliances for established homes by 2025, and set targets and plans to replace domestic gas appliances by 2030.

Mr Rattenbury: As you will recall, on 4 August, the ACT government produced its plan around moving away from gas, which includes an immediate move to prohibit the rollout of new gas connections in greenfields and in a range of urban infill environments. With the rest of the dates there, we are less clear-cut on the specifics of that. We have certainly indicated that clear intent to move away from gas. So far, I believe, we are the only jurisdiction in Australia to commit to that.

MS CLAY: That is good to hear. The fourth call they have is to provide rebates to reduce the up-front purchase cost of electric vehicles and rapidly roll out suitable

charging infrastructure. How are we going?

Mr Rattenbury: We have, of course, a number of financial incentives for EVs. We have two years of free registration, zero stamp duty in the ACT and the provision of the Sustainable Household Scheme as an interest-free loan. With that \$15,000 limit, obviously, an EV is more expensive than that, and there is a price differential between ICE vehicles and EVs. That \$15,000 loan sits in that space; it does cover some of that gap. There are a number of incentives. I am sorry; what was the second half of that question?

MS CLAY: Chargers—charging infrastructure.

Mr Rattenbury: We announced, not so long ago, the successful completion of a tender process for the rollout of more chargers in the ACT. They are all due to be delivered within the next 12 months.

MS CLAY: That is great. With the \$15,000 loan, is there any modelling? Are there any services that we have that show people how they will save money, in addition, if they switch over to EVs?

Mr Rattenbury: Ms Malouf might be able to help on that one.

Ms Malouf: That has not been determined yet, with the first 14 months of the scheme being developed. There is an evaluation of the scheme going forward. Some of those numbers, including determining gas conversion, will be part of that evaluation, which is due—

Mr Rattenbury: The question was on zero emission vehicles. The answer is that the ACT government has not published any specific cost modelling that says, “If you buy this car, you’ll save this much a year.” Certainly, those kinds of analyses are around. The NRMA will have done them, some of those motoring websites and the like.

It is still quite dependent on people’s usage pattern. Certainly, for example, we have set up the ACT government’s fleet advisory service. With the government fleet having transitioned over, there are a lot of lessons being learned and some good economic analysis being done of that. We are using that to help businesses understand their fleet needs and what the economic equation would be for them. There is some of that work, but I think there is scope for some more.

MS CLAY: The fifth call they have is to support a used EV market by ensuring that government fleets upgrade to EVs, thus putting second-hand EVs into the market.

Mr Rattenbury: Yes, that is government policy. This year, 2022, we should probably see the first ACT government vehicles starting to come out of their leases, and available in that second-hand pool. They would be smallish numbers because in the ACT government program there has been a gradual changeover, as leases have run out, to replace them with zero emission vehicles. That policy first kicked off in 2019, so we should be starting to see the first vehicles coming out of their leases and into the second-hand market.

MR COCKS: Minister, I would like to go to emissions reduction. The Climate Choices website states:

The ACT is committed to net zero emissions by 2045. We're following the ACT Climate Change Strategy to help cut emissions by 50 to 60% (from 1990 levels) by 2025. We can all take action to reduce emissions for a more liveable city now and in the future.

Yes or no: will you achieve the 50 per cent reduction by 2025?

Mr Rattenbury: That is our target.

MR COCKS: Not whether it is the target; are you on track to achieve that?

Mr Rattenbury: Certainly, with the last greenhouse gas inventory, we were at 43 per cent below the 1990 level, so we are going okay. There are some challenges. It is a big transition, and probably this next goal is the hardest one to achieve.

MR COCKS: When was that last looked at?

Mr Rattenbury: The inventory comes out every year in December.

MR COCKS: I understand that you have previously ruled out buying carbon credits to achieve the target. Is that still your position?

Mr Rattenbury: Yes, that is the policy that is articulated in the Climate Strategy. The ACT could be net zero by tomorrow, if we were prepared to spend enough money on carbon credits. I think that is a very short-term solution. Our view is that it is better to continue to invest what is ultimately taxpayers' and the community's money in genuine mitigation, rather than send money overseas for credits that might look good on paper but are not perhaps a genuine effort to actually eliminate our emissions.

MS CLAY: Minister, there is a hierarchy, isn't there, in emissions reduction, in which carbon credits come at the bottom and emissions reduction comes at the top? Is that how it is usually done?

Mr Rattenbury: That is certainly the premise behind the ACT's Climate Strategy. Many advocates would put the case that the first and foremost thing to do is to reduce your own emissions; offsets sit pretty much at the bottom of the hierarchy. There is potentially a place for offsets, in the sectors that are really difficult to abate. The approach we have taken in the ACT is that we are still a fair way up the abatement curve, if you like, where there is still plenty of scope for the ACT to reduce its own emissions.

MS LAWDER: Minister, can you explain, under the scope 3 emissions, when you are producing wind turbines, batteries et cetera, how you account for the environmental damage caused by mining, and reduced renewable energy infrastructure?

Mr Rattenbury: There is a complicated accounting answer to your question, Ms Lawder, and I will have a quick go at it. With those emissions, if the aluminium is dug

up in a country overseas, all of those emissions actually sit in the scope 1 emissions of the host country, if you like. So all scope 3 emissions have scope 1 or scope 2 emissions somewhere else.

The best way to describe it would be to say that scope 3 emissions are the consumption emissions, if you like, and the scope 1 and 2 are the production emissions, to a large extent. Probably someone who is an expert in this would be a bit horrified by my analysis, but that is my plain English explanation of it. You should ask Ms Clay about it at the end of the session; she is actually better at this than I am.

MS LAWDER: Surprisingly, I want to ask about Lake Tuggeranong and the Healthy Waterways program. We have spent over \$35 million on Lake Tuggeranong over the last eight or so years. The *State of the lakes and waterways* investigation report from August 2022 found that Lake Tuggeranong often has poor water quality and regularly suffers from blue-green algae and high levels of faecal contamination. Minister, why do we continue to see these high levels and how have the levels of cyanobacterial blooms and faecal contamination tracked over the eight years or so of the Healthy Waterways program?

Mr Rattenbury: On the latter part of that, given that you have been provided with all of the data through questions on notice in the last couple of years, I think you have all of those data points that the ACT government has tracked. It would be useful to understand what further data you are after, from the second half of the question. I am happy to come back to the first half, but I am clarifying about the second half, so that we give you the right information.

MS LAWDER: I want to know why it is not getting better.

Mr Rattenbury: Let me come back to the first half then. As we have discussed in this forum to some extent before, obviously, we have committed quite a bit of money to research in this process. The water quality assets that have been put in, based on the feedback I have, are improving water quality, but we face two issues. One is that there is already significant build-up of nutrients in Lake Tuggeranong, which are gradually being used up in the system. The other is that more recent University of Canberra research has identified that the nutrients are coming from quite a long way up the catchment. This is the issue of leaves in the gutters, and other matters that we have spoken about before.

That is why you are now seeing a change of emphasis in the Healthy Waterways program, to move higher up the catchment, to try and create the layers of improvement as the water comes down. It is about taking more nutrients out of the top, so that those assets at the bottom become the second layer of insurance, if you like.

The answer is that it is a long-term project, and it is taking longer than I know the community would care for.

MS LAWDER: With the water quality assets that you alluded to, there are a number of them throughout Tuggeranong, mostly eventually leading towards Lake Tuggeranong. What is the maintenance and inspection schedule for those assets?

Mr Rattenbury: I will look to Mr Corrigan on this one.

Mr Corrigan: TCCS manages the assets. There are a number of programs in place to manage those water assets. With respect to the details, it would probably be more appropriate in tomorrow's questioning; the people will be there who can go into the detail. Each of the programs is designed to clear, particularly, the gross pollutants out of those gross pollutant traps and the like, on a regular basis—the ones at Stranger Pond, for example, and ones like that. We can get more detail there about what comes out of those GPTs as well, which is also quite informative.

MS LAWDER: When the Office for Water begins, will that responsibility remain with TCCS or will the Office for Water take responsibility for the ongoing maintenance of those assets?

Mr Rattenbury: The actual day-to-day maintenance of cleaning out GPTs and those sorts of activities will remain with TCCS. It is not the intent to move things around that much. The intent behind the Office for Water is that it will lead, from that policy coordination view. It will also build up stronger connections with those agencies. Our broad intention is that agencies will be less siloed in this work and there will be a more proactive effort to engage with agencies and share data, share lessons and share some of that information on what is coming out of drains.

MS LAWDER: What will the process be if TCCS find a problem with a GPT or floating wetlands, and they require removal, replacement or whatever of that particular asset? Does that then go to the Office for Water?

Mr Rattenbury: That is a good example of the ways that these things will start to work. I would expect, in that context, that TCCS would talk to their contact in the Office for Water. They would work through it. It might still be that TCCS came forward with a budget bid because they had worked out that was the more appropriate pathway, or the office might do it. The point is that there will now be a better coordinated approach, and there would be confidence that the work is happening in the way that it should.

MS LAWDER: I note that, during estimates, there was a question from Mr Davis, I think, about aerators in Lake Tuggeranong. You said that research showed it was not perhaps suitable for Lake Tuggeranong because the inflows may bring four to five times the nutrients compared to the sediments. Would the aeration still not reduce the amount of free reactive phosphorus in the pond through oxidation and help reduce the overall accumulation of organic sediment on the bottom of the pond?

Mr Rattenbury: I will hand over to one of our experts, Dr Ogden.

Dr Ogden: I have read and understood the privilege statement. I do not believe that the aerators will increase the amount of sedimentation of the input of phosphorus. The phosphorus that comes in will be taken up by algae quicker than it would get sedimented to the bottom of the lake, through high oxygen in the water.

MS LAWDER: With the remaining funding for Healthy Waterways stage 2, have you determined what that is going to be spent on?

Mr Rattenbury: As in the full list of proposed projects?

MS LAWDER: Yes.

Mr Rattenbury: Yes, we do have a list. I cannot remember whether it has been given to you before, Ms Lawder, so let me take that on notice and check.

MS LAWDER: Thank you.

Mr Rattenbury: Yes, there is a list of projects in mind. The final cost of them probably still has some movement in it, as they go through the full design process. For example, we are out consulting on the project in Belconnen at the moment, at Emu Ridge. The community is already giving some feedback which is leading us to reconsider some of the design issues. The cost of that project may move around a little bit. What I can give you is a list of the intended projects, but probably not a list of the final cost, because, through the consultation process, we anticipate a degree of movement.

THE CHAIR: Minister, my question is in respect of the ACT Climate Change Council. I am interested to know about Indigenous engagement with that council. For example, do members of the Dhawura Ngunnawal Caring for Country Committee have an active role in providing advice or anything to that committee?

Mr Ponton: I have read and understood the privilege statement. The short answer is yes. The Climate Change Council has actively sought to engage with the Dhawura Ngunnawal Caring for Country Committee and Aboriginal and Torres Strait Islander people more broadly. Before I departed my tenure with the council, which was in June this year, we were having members, Aboriginal and Torres Strait Islander people, attend the council meeting as observers, so absolutely the Climate Change Council is very, very much engaged with that community.

THE CHAIR: What efforts are being made and what discussions have been had by the council to engage with more marginalised communities in the ACT on how they may be impacted by climate change?

Mr Ponton: In terms of the skill set that the council has, there has been a focus not only on Aboriginal and Torres Strait Islander people but on communication and engagement more broadly. The directorate has a strong communications and engagement team and we have drawn skills into council in that respect so that we can start not only focusing on the technical issues, as you would expect, but looking at how we then engage with those people that you are referring to, Chair, in making sure that the work of the council is known, is understood, and also that the council can bring into its considerations and deliberations the views of those people.

Just before I departed—as I said, I left in June from my tenure—I know that there was a subcommittee of the council that was really starting to work out how that could then be embedded into its work program. I might look to Ms Wright as to whether or not there have been further developments since that time, given that Ms Wright does continue to attend those meetings.

Ms Wright: Thanks. I have read and understood the privilege statement. Yes, D-G Ponton is correct that our subcommittee have continued to work and they have undertaken consultation on the development of their community stakeholder engagement strategy. I believe that will be presented to the council at the next meeting.

THE CHAIR: Great. One of the things the council is doing is working on the social cost of carbon; is that correct?

Mr Ponton: Yes.

Mr Rattenbury: They are certainly providing advice to the government.

THE CHAIR: I saw a media release that said by 2025. It says:

We will be drawing on independent and expert advice, including from the ACT Climate Change Council, as we develop an agreed value for the social cost of carbon by 2025.

How are those discussions going and where are they at in terms of progressing that?

Mr Rattenbury: In the budget before last—no, last budget?

Mr Ponton: Budget before last.

Mr Rattenbury: In a recent budget—the budget before last; I think he is right, yes—we started to implement the interim social cost of carbon at \$20 a tonne. There is a range of academic analysis, particularly coming out of the US, where this idea has been developed around what the full value of the social cost of carbon should be, and so that is the work that we are doing. Looking at that academic work, the Climate Council has been very helpful in identifying some of those research papers, analysing them, drawing out the differences between them and talking with government through that process. They have also had a session with Treasury and talked to Treasury about how this can work and the rationale behind the social cost of carbon. It is quite a new concept, so a lot of the discussion at this stage has been that expert input from the members of the Climate Council who are working in that space.

THE CHAIR: When we set the interim at \$20 a tonne, are we using that interim level to do analysis? Why did we set the interim level?

Mr Rattenbury: The interim price has been put in place. Now each directorate has an inventory of their carbon emissions, CO₂ emissions, and essentially \$20 a tonne has been ascribed to that. That has been put into a pool of funds that is available to the directorates to then apply to do emission reduction projects. That is how it has been used in the short term: to create capability for projects to be funded that might not otherwise be funded through the budget process.

THE CHAIR: That would come under Chief Minister's?

Mr Rattenbury: Yes, it is with EPSDD.

THE CHAIR: What sorts of projects have been funded through that?

Mr Rattenbury: Ms Wright, you might help me again.

Ms Wright: I have only been here eight months. I can talk about what we have looked at for this year. We are in the process now of reviewing a whole number of projects for this year. It is quite a number in the pathway to electrification, looking at the gas changeover. We have also been looking at different kind of additions to fleet. I might ask Ros to speak to some of the other ideas.

Ms Malouf: In 2021-22 the projects that were funded through the social cost of carbon were \$197,000 for a workshop upgrade to electric heating and to implement solar PV at 255 Canberra Avenue. That project has been implemented. There was \$800,000 for TCCS, for the Yarralumla Nursery, to convert from a gas boiler to an electric boiler. That project is underway. There was \$400,000 for the education department, for Fadden school to upgrade to an electric heat pump, and the project is in the implementation stage.

THE CHAIR: Great. Thank you.

MS CLAY: Minister, do you think the social cost of carbon fund is likely to support industry the way some of the other government programs have supported industries in renewables and new sectors?

Mr Rattenbury: If I understand your question correctly, it will, in the sense that the sorts of projects that are going forward that Ms Malouf has just described are still newish projects. They are not happening commonly. The fact that the government is doing these projects is creating an industry that will become better, the costs will come down and the technology will become more readily understood. So I think the answer to your question is yes.

MS CLAY: Minister, I would love to check in on the Office for Water. That is a fairly new office. Can you tell me why you set it up, what was the problem that you were trying to address and what progress you have made so far?

Mr Rattenbury: I will start with the rationale, then I will ask Mr Burkevics to detail where it is up to. The rationale, as I was touching on with Ms Lawder earlier, was very much to improve the coordination of water policy across government. There are a whole series of places in the ACT government that are interacting with or responsible for parts of water policy, be it stormwater, potable water delivery, recycling of water for use on sports fields and the Healthy Waterways program. There are all these different areas that touch on the water space, so we wanted to provide a more centralised place for that policy work to be done, to improve coordination.

The second part of it is to actually build expertise. The ACT government is quite thin generally and had one or two people in one agency doing some water stuff and one or two people somewhere else. My view was that having people working more in a coordinated team would provide a degree of professional cohesion and an opportunity for people to work together. That sort of expertise sharing is another important part.

It is perhaps less tangible but I think will have a very positive impact. That is the rationale behind the establishment of the office. Mr Burkevics can talk about progress.

Mr Burkevics: Minister, thank you. I have read and acknowledge the privilege statement. Ms Clay, thank you for your interest and your question on the Office for Water. My time with the directorate is now close to four months, but, as the minister has indicated, there is a strong need to bring together the different resources across government in relation to water policy and programs. That work is well underway. As of last week we recently appointed a senior director to take leadership of the Office for Water, and that will start that process of bringing together the different water resources within the division under a single leadership, reporting directly to me.

As part of that process it is necessary to undertake consultations with staff and unions. That process has been completed, although there are ongoing conversations with staff about broader fine-tuning of structures within the division. In terms of the Office for Water team—and I commend Dr Ogden for his passion to ensure that recruitment happens as soon as possible to support his programs and activities—a wide range of recruitment activities have occurred across the directorate, including for catchment planners and data analysts.

That has prompted one of our initiatives that I think we discussed in the last hearings: an assessment of water quality and risks across the ACT that is ongoing, as well as catchment plans. The formation of the office is progressing very, very well. The senior director will start the week after next and that will bring together those necessary resources and provide a combined and joined-up approach within the division in relation to water policy and program matters.

MS CLAY: That is great to hear. How many FTEs will be working in that area, in the Office for Water overall?

Mr Burkevics: I am happy to take that on notice, Ms Clay, if you would like an exact number. From memory, there are between 10 and 20, if I am not mistaken. Dr Ogden or Mr Breen might be able to provide a more specific number.

Mr Breen: I have read and acknowledge the privilege statement. The structure for the Office for Water is still in fine-tuning, as Mr Burkevics was indicating. We are looking, at this stage, at an FTE number of 16 staff.

MS CLAY: Thank you. There is a lot happening in our region on water at the moment. I think all of us get approached quite regularly by people interstate, various councils, regional developments and things, thinking about their water, going into the future. Is the Office for Water likely to be taking that coordination lead for ACT water but also in regional participation and national participation?

Mr Rattenbury: Yes and no. There are two answers to that. One is: yes, they will be, in providing advice on things like the Molonglo River flow between different regions, and the Murrumbidgee. They will certainly take the lead there. They will also be advising me in my role as a member of the Murray-Darling Basin Authority Ministerial Council. But then there is also the role that the Chief Minister's directorate, and therefore the Chief Minister, plays in intergovernmental relations. That goes to

questions of water supply across the border. They are tied very closely to the Office for Water, because they perform that specialist intergovernmental role; they sit in a slightly different place.

MS CLAY: That is with Chief Minister's. Thank you.

Mr Burkevics: Minister, I could add a few further details.

Mr Rattenbury: If Ms Clay wants, that is fine.

Mr Burkevics: Ms Clay, further to the minister's response, I think it is fair to say that, under the Water Resources Act, the establishment of the ACT and Region Catchment Management Coordination Group provides a formalised statutory mechanism to bring together stakeholders in relation to water matters. There is an independent chair of that group. That group involves stakeholders and has proved to be a very effective means of coordinating water policy and program matters between various stakeholders such as Icon Water, the New South Wales government and others from within EPSDD. Chief Minister's, as well, are represented on that group. So that body plays a role in coordinating a wide range of policy matters.

THE CHAIR: I know Icon Water has a drought management plan. Does the government as a whole or Healthy Waterways have a drought management plan?

Mr Burkevics: I might defer to my colleague Mr Glennon. If I am not mistaken, we are in the process of developing a drought plan, particularly for farmers, but I will hand over to Mr Glennon.

Mr Glennon: I have read the privilege statement and understand that statement. Yes, as Mr Burkevics just said, Icon Water do have a drought management plan. It very much targets what levels a dam might get to before certain actions kick in. That relates back to the water conservation principles and things like that, which were developed previously through the directorate and with Icon Water, so that is their plan. TCCS have a number of strategies in place for how they manage each of the lakes and waterways in the system and whether they are open for recreational use or whatever it might be.

As Mr Burkevics said, we are currently working with rural leaseholders on developing their drought management strategies as well, which will include a number of things. One will be a land management component and one will be a business component that would make those businesses that are reliant on those activities more resilient, if you like, to a changing climate.

THE CHAIR: Further to that, while it is all green out there at the moment, we know how quickly it can turn. Do you think, Minister, that we should have a drought strategy for our waterways in the ACT?

Mr Rattenbury: It is probably a definitional question, Dr Paterson. You have obviously got something very specific in mind that the answer you have just been given does not go to. So I am not sure how to answer you—

THE CHAIR: I guess that just went to the dams, whereas all of our waterways would be very highly impacted by a drought. Do we have a management plan for dealing with those impacts in the future?

Mr Rattenbury: Yes. Mr Corrigan, do you want to jump in there?

Mr Corrigan: Yes. I might try and assist. In TCCS—that is where I mainly work—there are drought plans from an asset management and maintenance point of view. That includes the waterways and various things. That is from pumps to irrigation and how we would manage that when the water levels are low; those sorts of things. In 2019-20 we were obviously in drought, so we monitored that and managed those assets to make sure that things were okay. At the time, you might recall, we had an altercation about one of the ponds down at Tuggeranong and part of it drained out. So we do keep an eye on those things. Long answer.

Short answer: yes, at TCCS, from an asset management point of view, we definitely have plans for how we manage in drought, as we do with wet conditions as well. I should also add that, at the moment, with the grass growing the way it is, that reduces the irrigation needed for sportsgrounds. That reverses in times of drought, so how we manage our sportsgrounds and the water usage and how we monitor that are the sorts of things we look at. We want the most efficient watering so that we can keep the sportsgrounds open and those sorts of things and so that, at the same time, the grass needs less mowing.

Mr Burkevics: My colleagues are signalling to me to they have got some contributions. One of the functions of the Office for Water, as previously discussed, is to undertake a range of water security assessments. I know that drought and water security is one of those assessments that will be work ongoing for the next year. I will invite Dr Ogden to make a few remarks.

Dr Ogden: Drought and climate change, and climate cycles generally, are taken into account in the water quality and quantity models that we are developing so that we can understand how our management stands up in extreme events.

MS LAWDER: Are you, as part of that drought management plan, looking at water back from Tantangara? Tharwa often has to truck water in because of low flows. Will that be part of your plan?

Mr Rattenbury: That is an issue we are taking up directly with the commonwealth around the Snowy Mountains scheme. We saw an incident just a couple of years ago where the Murrumbidgee actually stopped flowing for the first time in anyone's memory. Even the Indigenous custodians could not recall that and had no spoken record of that. So this is an issue we are directly raising with the commonwealth. I have written to the commonwealth, seeking to discuss with them further how we manage that, particularly with the new role for the Snowy hydro scheme, Snowy Hydro 2.0. I think there are some really important questions to resolve there. We do not have an answer yet, but it is certainly on the radar. I am quite concerned.

MS LAWDER: I know we mentioned Icon Water somewhere in there and stakeholder involvement in that processes. We had three bypasses this year, which is

quite high. I think they are designed for once every seven years. Are you working with Icon to try to address how we might prevent those overflows?

Mr Rattenbury: Yes, we are. The extremely high rainfall we have had this year is why we have seen that sequence of events. It obviously is of concern to us and nobody wants to see that happening. As I mentioned to you when you asked this in question time, the material that is being released is partially treated, so it is not raw in that sense, but it is still of concern. Icon currently is undertaking work to plan the next upgrade of the treatment system at lower Molonglo and one of the questions to be resolved in that process is volume and capability. So it is an active conversation and the government is engaging with Icon in those discussions.

MS LAWDER: Will the Office for Water that we spoke about take over things like trade waste licensing?

Mr Rattenbury: I do not believe so. That sort of licensing is, I believe, currently done through Access Canberra. Because they have that sort of licensing role across a whole lot of areas, I would not expect that to change. The Environment Protection Authority sits with Access Canberra as well. As Minister Vassarotti and Minister Cheyne indicated, they are undertaking a review of the EPA at the moment. There is some discussion going on there. The two agencies, as we said, are working on this. We are looking very closely at what roles the EPA has and what roles the office will have in making sure that there is no duplication and no gaps.

MS LAWDER: Yes. That was my next question: what enforcement role might the Office for Water have, if any, and engagement with other ACT government departments? There are obviously some non-compliant trade waste events. We had one heavy metal inhibition event reported in the Icon Water annual report, presumably from non-compliant trade waste. Obviously, there are things falling through the gaps. What are we going to do or change to try to address that?

Mr Rattenbury: We will throw to the EPA here on the video screen. Hello.

Dr Wild-River: Thanks. I have read and understood the privilege statement. Just to clarify, the regulatory compliance matters associated with the Water Resources Act will be staying with the EPA, so we will continue to do the work of licensing the water allocations, doing the meter readings and enforcing any non-compliance with any of those aspects of it. That is also where we generate a lot of the data which we then report to the commonwealth for compliance with the basin plan.

The EPA does not do the trade waste licenses. Those arrangements are between businesses with a large trade waste component and Icon Water, although a requirement to have a trade waste licence in place does often come up with an environmental authorisation under the Environment Protection Act. What we are seeing is that the regulatory and compliance elements of water management are staying with the EPA. We work collaboratively but with that firewall between the policy and the regulatory arms of water management in the ACT. I hope that answers the question a bit.

MS LAWDER: Yes. Thank you.

MR COCKS: One of the great risks when establishing any separate office for a particular policy area is that it can become more siloed and you can see a disconnect between policy and on the ground operations. As we have just heard some of these functions are sitting with different agencies. Have you considered those risks and what are you putting in place to try and maintain those connections?

Mr Burkevics: Thanks, Mr Cocks, a very valid assessment. I view the Office for Water being established as a countermeasure to that exact problem. It brings together the different mechanisms, both water mechanisms for policy and programs and through the various teams or branches within the office it ensures those connections to other areas across ACT government such as Transport Canberra and City Services, who we already share a very good relationship with, Chief Ministers and the EPA. Particularly I think imbedded within the Environment, Heritage and Water division it provides a one stop shop for all environment, heritage and water matters and through the internal governance arrangements I think it ensures there is a very solid process for collaborative policy development and deconfliction of different policy and program issues.

MR COCKS: It sounds like you will be looking for both formal and informal connections there.

Mr Burkevics: Most definitely. We are commencing some work across the division at the moment as part of the fine tuning of structures to best support the office and other functions, to best focus on current and future challenges that we face in the portfolio. I am very keen to have a close look at the governance arrangements currently in place within the division to ensure they are effective and best ensuring all matters that the division is responsible for are well-programmed within the division, within the directorate and widely across the ACT government. That work will progress into next year.

MR COCKS: Onto energy concessions. There was a *Canberra Times* article on Friday, 4 November with the headline “Many don’t claim \$750 ACT concession.” It goes to the report released by the Consumer Policy Research Centre which found that 41 per cent of ACT residents eligible for an energy concession were not accessing it and that was the highest gap of all the states and territories. Minister, were you aware of this quite low level of uptake prior to the report being released?

Mr Rattenbury: Yes. I am just looking for my notes now, Mr Cocks. I am aware of the report. Two observations. One is that concessions actually sit with the Treasury agency much more. But our analysis of that report is that we believe the report has not accurately measured the number of people eligible in the ACT. They have taken a different definition. It is Treasury. So I just know this because I have read it.

We believe the report authors have used a different definition to who is actually eligible in the ACT so we do not believe the number of people they have identified as 41 per cent who are not claiming it. We think that is an overestimate. Nonetheless, it is a useful report and we will use it as an opportunity to re-examine how we identify those programs. But what I can say is it is very simple to get onto them. All you need to do is ring up your electricity retailer and indicate to them that you have the

concession card and you will be put onto it.

MR COCKS: I am interested in whether there is any analysis that has been undertaken around the barriers to getting people to take up these, particularly those people who experience barriers of awareness, those people who are from low socioeconomic groups. Have you or your team undertaken any analysis in that area?

Mr Rattenbury: We certainly understand there are issues of energy literacy. In the modern world with all the different plans you can get onto, it can seem quite complex for people and difficult to get your head around. There are obviously national things like the Energy Made Easy website where you can go on and do comparisons. One specific project we have in the ACT though is to fund some of our non-government partners to run energy literacy programs particularly targeted at the cohort of people that you are referring to. I think your point is a really important one. That partnership is being run with CARE and St Vincent de Paul, who are two of our key partners. The reason we have done that rather than the government doing an advertising campaign trying to target people is we know those organisations have connections with those people already, connections with people who might need this assistance. They are trusted. We think they have the best ability to convey some of the information and help people work their way through those questions—whether that is how to get concessions, how to get on the best energy plan, how to make your home more energy efficient—because there are a range of things that sit behind it but the problem is often one of access. So we have specifically funded them to run programs, to go out and run sessions, talk to individuals, these kinds of things, to try and break down some of those barriers. I think that goes to your question.

MR COCKS: It does. Yes. I am interested in proactive measures in particular and how you are reaching into those community groups. You have outlined a few there but I would just encourage actively reaching out to those people who are finding it difficult.

Mr Rattenbury: Yes, your point is right. I think it is trying to figure out what the different cohorts of people are and how to engage with them. You referred earlier to the Climate Choices website. That will go to a bunch of people who are quite proactive themselves in going to seek out information to try to make it simpler for them and they will go and get the information themselves. Whereas there are other groups that probably need a more proactive approach. That is where people like St Vincent de Paul, who are often supporting families and others who after having other financial difficulties and as part of that package bring the energy story to the table, even though that household might not identify as having an energy problem, if that makes sense.

MR COCKS: Yes. I would be interested to see the correlation of those numbers.

MS LAWDER: In the *State of the environment report 2019* recommendation 28 called on the ACT government to:

Produce an annual recreational water quality report that includes monitoring results, investigations into the main sources of pollutants, recommended actions to improve water quality, and assessments of management effectiveness.

This recommendation was agreed to in principle. But in this year's annual report, the Commissioner for Sustainability and the Environment labelled the government's progress on this recommendation as unsatisfactory. Why have we not had an annual water quality report and why has there been no satisfactory progress towards meeting that recommendation?

Mr Rattenbury: Mr Breen?

Mr Breen: There is an annual report card against the ACT water strategy. I understand that may not go into the level of detail which some may be looking for. The Office of Water has a substantial work program over the next two years. Part of that will be looking at the ACT water strategy in its midterm review and also looking at the monitoring, evaluation and reporting requirements against that strategy.

MS LAWDER: Okay. So you have a report against the water strategy yet the Commissioner for the Environment says that progress is unsatisfactory against a recommendation that the government agreed to in principle. So why would the government agree to something in principle but then fail to deliver on it?

Mr Rattenbury: I think the answer you were just given is that it is being worked on but clearly the commissioner wants it done faster. I think that is the bottom line.

MS LAWDER: Faster? So between now and next year's annual report, will there be some changes so that you do address the commissioner's dissatisfaction? No, perhaps that is the wrong word. Finding of unsatisfactory progress?

Mr Rattenbury: Yes, that is probably the right word. Yes, it is on the work program and we will endeavour to get to it as quickly as we can.

MS LAWDER: So are you saying the government has no intention of delivering an annual water quality report as outlined by the commissioner?

Mr Rattenbury: No. As you have quoted from, our position is one of agreement in principle and we are now working through the details of how to implement that and exactly what it will look like.

Mr Burkevics: Ms Lawder, I think it would be fair to say that there is a wide range of publicly available data in relation to the ACT's water quality. The Catchment Health Indicator Program, otherwise known as CHIP, produces a very informative and useful report about water quality. I know that Icon Water also describe in their various reports water quality. So I think there is a wide range of information that is already available in relation to water quality. As the minister indicated, some thinking has to be done about the best way to ensure it is represented in an easily accessible way.

MS CLAY: Minister, we had a discussion last week in hearings with the Commissioner for Sustainability and the Environment and then with Minister Vassarotti about a number of recommendations in Minister Vassarotti's portfolio that the commissioner had found unsatisfactory in a similar way, agreed in principle and she found the progress unsatisfactory. The conversation with the commissioner led us

to the conclusion that sometimes unsatisfactory meant the work is not being done and sometimes unsatisfactory meant the commissioner has not been given enough information to know if the work is being done and that further consultation was required. Do you think maybe on this recommendation there might be a conversation with the commissioner about what the progress is and whether that meets requirements before our next reporting period?

Mr Rattenbury: I had not heard that conversation last week, so thank you for that. I think it sounds like we should make a phone call and organise a meeting, yes.

MS LAWDER: The government did produce an annual water report up to 2015. So why did we stop and why are the CHIP report and the score card and things not meeting what the commissioner says may be required?

Mr Rattenbury: I am sure you have asked me this on notice, Ms Lawder and I am sure we have given you a web address where these reports are available. They have been produced since 2015 and 2016. They are online and Mr Breen is going to tell me the details of where, I think.

Mr Breen: So the older reports, the more substantial reports that you refer to did cease in, I think it was 2015. At that time, which I was not around for but talking with other colleagues, I suppose there was a look across the number of different websites and reports that were produced that provided similar material and so a simpler report card which was focused on the ACT water strategy was produced instead. So there is quite a substantial amount of material that is publicly available. The Office of Water as I have mentioned before, is undertaking work to look right across the different sources of information and at what the public interests are, or the information needs are, and look for ways which we can make that information more accessible. It may not necessarily be the annual report of old.

THE CHAIR: Minister, in the annual report it states the greenhouse gas emissions inventory for 2020-21 but says that 2021-22 was not available at publication of this annual report. I was interested to know is it available for you to give us the emissions number for this year now? Or when will those numbers be released?

Mr Rattenbury: They normally come in December each year so it should be available before Christmas. It is usually about the second week of December, give or take.

THE CHAIR: On greenhouse gas emissions, the inventory report is looking at transport emissions and it says things have come back up, rebounded to almost pre-pandemic levels since last year. Just looking at the transport emissions, is there analysis being done on that in terms of having cars off the roads—well, virtually off the roads—for periods of time. Is there currently in-depth analysis being done on that? What does a world look like with greatly reduced transport emissions in the ACT given we have some interesting case studies, potentially, come out of COVID?

Mr Rattenbury: I think there are two parts to that. Minister Steel has been doing a lot of work on this but I can paraphrase some of his work and I am sure he is happy to take more questions on it. Certainly what we have observed in the bounce-back from

the pandemic is public transport numbers have continued to be lower. There is a sense people have been uncomfortable about going on public transport in light of the virus being still present in the community. So in some ways there is a sense that possibly driving to work and driving around doing various things is perhaps higher even than what it might have been before the pandemic. There is still analysis going on but that is a sense that people have of the analysis. I think that is the first part of your question.

I think the second part of your question goes to how we are going to tackle that. That essentially comes down to electrifying our current transport fleet, be that private cars, busses, et cetera and alternatives to driving, which will include improved public transport and improved walking and cycling. At the very broadest level that is the response. I am happy to go into the detail but macro-wise that is what it looks like.

THE CHAIR: I am interested in table 3 in the *ACT greenhouse gas emissions inventory report 2020-21*. It looks at the transport energy use in the ACT and in 2018-19 it was 36—I do not know what the measure unit is, GJ—

Mr Rattenbury: Gigajoules, probably.

THE CHAIR: There we go. It was 36 and in 2019 it went down to 31.8. So it only really reduced four units. Given our world changed and there were lots of people working from home and periods of time where we were in lockdowns and people may have only gone out once a week or a couple of times a week. We have had a massive impact in transport over the last couple of years yet it is not really reflected in the data, I would suggest. So I am interested if there is further insight into why those transport emissions did not come down.

Mr Rattenbury: Well it came down a bit over a ninth, so that is about 12 per cent give or take, which is quite a bit considering we were in lockdown for what a month, six weeks. I am doing sort of bush maths sitting here across the table but you can see it there. I do not know if anyone wants to add any comments.

Mr Corrigan: It is probably best to put it to the minister for transport, because I know the TCCS in the Transport Canberra space have done a bit of analysis here. Broadly even in the lockdown there was residential, domestic traffic trips things like that. There was still freight and a reduced public transport service was still operating to get people around the city, essential workers and the like but also the freight and all that sort of movement still had to occur.

MR COCKS: Given transport is such a high contributor to our emissions, have you undertaken any analysis of the impact of increasing congestion on our emissions?

Mr Rattenbury: Two things. One is that because transport has gone up a lot in proportion in moving to 100 percent renewable electricity it has pushed transport up substantially as a proportion because those stationary emissions of electricity used to account for 44 percent of our emissions. So in removing those transport has obviously grown in proportion.

MR COCKS: But it still was a significant contributor then.

Mr Rattenbury: Yes, sure. Now it has made it our number one problem because it is now 60 plus percent of our emissions. In terms of congestion, globally I have seen studies on those sorts of issues but I am not sure if there is anything specific locally.

Mr Corrigan: It is a question probably best directed at Transport Canberra. Certainly national levels of congestion obviously increase emissions, absolutely, but in terms of what has been done in the ACT context that should go to Transport Canberra.

MR COCKS: It is a pretty significant emissions source. Surely you have done analysis of the impact of traffic changes and the increasing congestion.

Mr Corrigan: We probably have in TCCS. I just cannot answer that now so it is probably a question best directed to TCCS.

MS CLAY: Minister, there is a lot of people concerned about flood risk at the moment. I suspect this is a question that will get referred on but I am going to ask it anyway because it is hard to work out from the outside who has responsibility. I often get approached by community members and stakeholders who are concerned about flood risk in a certain area of development. The question they ask me, which I think is quite reasonable, is has our flood modelling been updated for a changing climate or are we using old flood modelling when we get report back that says it is okay to develop here? How do we trust that? Is that a question for the Office of Water or is that a question for the Minister for Planning and Land Management?

Mr Rattenbury: Let me check. There is definitely work happening on this in the ACT government. I am just going to check who knows.

Mr Glennon: Yes, a flood modelling was done very recently for the ACT. It was for a one percent annual exceedance probability flood, or to use the old terminology, one in 100 years, but the terminology has changed. So the flood models are updated. The models were done in accordance with AR&R, Australian Rainfall and Runoff, which is a standard that the engineers use to calibrate their models and that sort of thing. It does not take into account, we think adequately, climate change and that sort of thing but that can easily be done by just changing the risk factors. I said that the models were done for the one percent AEP. They were actually done for a number of events so if you had a particularly high risk development you were looking at you would just use a higher flood-rating capacity to take into account the extra risk. But to answer your question, the flood models have been updated very recently and they are done in accordance with the industry standards.

MS CLAY: And who did those flood models sit with? Is it with the Office of Water?

Mr Glennon: I am not quite sure on that. They currently sit on ACTmapi. They are accessible to the public on ACTmapi, and I would imagine the Office of Water would be looking at them and would make the decision on when it was necessary to again update those models. The models are more likely to change from changes in the catchment and things like that, more development, those sorts of things. That will be the most immediate changes to the model rather than long-term climate.

Mr Ponton: If I could just clarify, to go to the heart of the question. The Office of

Water, so Mr Glennon and his team, undertake modelling. Then it is publicly available on ACTmapi and it is used by other parts of government such as the planning team.

MS CLAY: With a specific development such as Kippax, which has had a couple of flood modelling reports done five years ago and a couple of years ago, were those reports done with an updated climate risk sort of filter on them?

Mr Ponton: That would be my expectation. I look towards Mr Glennon. So Kippax?

Mr Glennon: I am not familiar with that exact site. The models I am referring to would be catchment sort of scale models. I know that when each developer does their specific developments they look at the site-specific impacts that might cause to flood flows in that specific area. Does that answer your question?

Mr Ponton: If I can just try and round this out: Mr Glennon works for the Office of Water. That is done at the broader scale and then proponents do more detailed work picking up the water model. For Kippax that would have been done through the normal due diligence which is done as part of EPSDD but a different part and that would sit with Minister Gentleman.

Mr Burkevics: Ms Clay, if I could just add through the minister that I am alerted to a very informative website on the EPSDD with flood risk and flood map information that provides very comprehensive information around flood planning in the ACT and, in particular, the maps. I think there is quite a degree of information there that might be useful.

Also for Ms Lawder in relation to the question on notice about the stage 2 Healthy Waterways Program, there is a stage 2 healthy waterways website that explains in detail all the various projects. That may be more informative, dynamic and up-to-date in relation to the question on notice, if you are comfortable with that.

Mr Rattenbury: I will provide those two web addresses on notice to the committee so as to formalise that and so people do not have to search for them.

MS CLAY: Thank you.

MR COCKS: The *Non-potable water review final report* was released in December 2021 but no government response has been released to date. Previous concessions or rebates for use of non-potable water, I understand, have been discontinued. Grants for developing onsite water harvesting and storage facilities are no longer made available to clubs and organisations. Abundant rainfall is not a long-term solution for clubs and organisations—for example golf clubs—because they need to plan for future costs and fee levels to remain viable. So when is the government going to publish a response to that report so that affected clubs and organisations can construct accurate budgets and financial projections for the next two to three years?

Mr Rattenbury: Yes, we are actively working on that at the moment, Mr Cocks. The EPSDD staff have been out meeting with a range of stakeholders, particularly golf clubs and other high-level water users. They are the main people with an interest in

this. They are actively consulting with them on a range of possible responses to that report and I am told those conversations have been well received in this instance. People are going to individual meetings to sit down and talk through possible models going forward.

MR COCKS: Certainly when I meet with some of these organisations they are doing it tough and, seeing all the water run down the hill at the moment, they are very keen to see the outcomes of this. Has any consideration been given to seeking more users of semi-treated water from Molonglo Treatment Works to help defray the costs of supplying water to users such as golf clubs?

Mr Rattenbury: Yes. That is on the radar at the moment with the development of the Ginninderry suburbs area. I understand that is one option that is being considered. Obviously the growth in population in that area opens up the possibility of the pipeline being used more extensively. They only have one customer at the moment. I think historically there were three but it is reduced to one customer and so clearly, if we can get some more customers, it would be a much better use of that infrastructure.

MS LAWDER: Is that solution feasible for Belconnen Magpies that we have spoken about, I think, at estimates?

Mr Rattenbury: Which solution is that, sorry?

MS LAWDER: Using the semi-treated water.

Mr Rattenbury: Yes. Belconnen Magpies currently are the customer on that pipeline but their concern is that the cost per unit of water is higher than they are able to afford.

MS LAWDER: Yes. You need more users?

Mr Rattenbury: Yes. If we were able to get more users and defray some of the costs that would certainly assist with that. So Magpies are probably one of our key considerations in thinking through this project. They have probably unique circumstances compared to other golf clubs. Other golf clubs have different issues, not to diminish those issues; the Magpies are in a position where they have a very reliable water supply because it comes from the pipeline but the cost of getting that water is higher than other venues and that raises a concern with the government. They do not consider the cost to be sustainable for them.

MS LAWDER: On water sensitive urban design I think there has been some changes made including as a result of the *Auditor-General's report no 1 of 2018: Acceptance of stormwater assets*. One of them was about a gross pollutant target of 70 to 90 per cent removal. As I understand it that has been put into place but how do you know that it is working? How do you measure whether those GPTs are meeting the target?

Mr Rattenbury: That is probably a question best put to TCCS because they manage the gross pollutant traps. You have not seen them yet, have you? They are still to come?

MS LAWDER: Tomorrow. So what other changes have you made to the water

sensitive user design?

Mr Rattenbury: Let me take that on notice Ms Lawder. I do not think I have the right people in the room to answer that question for you.

MS CLAY: Can I ask you in this session about the Diversification and Sustainability Support Fund?

Mr Rattenbury: That is best done when JACS are here, because they have responsibility for that.

MR COCKS: I would like to go to risk management. Again, being a long-term public servant, it is something my head goes to when I look at some of the incentive programs that we have out there encouraging behaviour change in all sorts of ways. I cannot help going back to some of the problems we saw some years ago now around pink batts. So the risk management activities I see in here look good, they are high level, they are wide reaching but they do not really seem to go to the specifics of that sort of program. What sort of risk management are you undertaking around incentives and behaviour change?

Mr Rattenbury: Ms Malouf and her team have particular responsibility for these and I know they take it very seriously, so let me defer to her.

Ms Malouf: We have taken the royal commission very seriously and dissected the report at great length to make sure those lessons can be learnt through this process. So with the insulation specifically, we have engaged an external consultant with a work health and safety expert on the panel to undertake work with both industry and the current insulation industry and also the training areas in the CIT and the MBA to understand what specific issues are raised through insulation activities. That piece of work has been completed and a risk management plan has been developed to a great length. The outcomes of that meeting have been shared with our stakeholders and also with industry bodies to make sure that we are covering this across the country. A lot of other states and territories are looking to the ACT and what is happening in this space, maybe waiting for the ACT to go first on this one. We have a dedicated training certification process. The training is being undertaken by both the MBA and the CIT for installers who must be certified under the Energy Efficiency Council program to become a certified installer under any of the government programs. That training has been in play for about 18 months and it is on a constant continuous improvement process to make sure we are meeting the needs of the market. For insulation activities we have done some pilots through our renters' program—we call it a "rent well program"—and to learn some lessons through installers as well. So there is some pretty diverse reporting that is coming out and ongoing continuous improvement.

Mr Rattenbury: Mr Cocks, that is specifically on insulation issues. I think your question is slightly broader.

MR COCKS: It is.

Mr Rattenbury: Built into the Sustainable Household Scheme there are a range of

other accreditation processes. For example, solar installers are expected to have Clean Energy Council accreditation. So we are using nationally recognised programs. As the ACT government is providing incentives, we also want to build a level of consumer protection into it so that we are not getting fly-by-night-ers, to use that expression—people coming in and trying to make a quick buck out of ACT government incentive programs.

MR COCKS: Okay. Thank you.

MS LAWDER: Recently we heard about some big bits of concrete washed away near Yarralumla in the stormwater channels. Is there any opportunity for naturalisation of that channel as part of the repair or is that too big a job for the funding that you have available?

Dr Ogden: The Yarralumla catchment is one of the seven catchments that we looked at for the current round of work. The naturalisation of the channel was not looked at. That is a really big channel. There is a lot of water going through that, so we have to take a lot of care in that. I think we are trying to do several creek naturalisations in the current line of work, on smaller channels, and we will learn a lot from that, but I would not be tackling Yarralumla as one of my first projects.

MS LAWDER: When you are building those new assets, what are they designed for? Is it a once in seven-year flood, a once in 100-year flood? What are the design specifications?

Dr Ogden: Just like any other development, we have to demonstrate that the proposed wetlands or developments do not increase the flooding beyond current levels, so it is a one in 100 year, yes.

MS LAWDER: So that is what would count as a major rain event: a one in 100-year flood? For example, when the floating wetlands in Lake Tuggeranong were washed loose of their moorings a year or more ago—

Dr Ogden: Yes. With the floating wetland that is being put in Yerrabi Pond, we had a higher threshold. I have forgotten the term. It is something like a maximum flood.

MS LAWDER: A good learning opportunity?

Dr Ogden: Perhaps, yes.

MR COCKS: The damage to those swales in the Yarralumla Creek area, besides being a very impressive demonstration of static pressure, has left quite a bit of debris. Are you able to talk to whether there are risks arising from the current state of those assets?

Dr Ogden: Yes. That is, I think, a question for TCCS because they are currently managing the assets.

Mr Rattenbury: That thunder was very loud! Mr Cocks, the answer to that was: that will be one for TCCS to check in with, if you are happy to come back with

them tomorrow.

MR COCKS: Yes.

Mr Rattenbury: Terrific. Thanks.

MS CLAY: Minister, there is a bit of an ongoing debate on climate justice, on how we help people who are less wealthy to make the transition. I know that is a focus for COP27. I know that we have great programs for certain people in Canberra, but there is a fear that we might leave some people behind. Can you run through the programs we have right now that will help people who are not home owners to save money, reduce emissions and possibly change their behaviour? What are we doing to help people right now?

Mr Rattenbury: Yes, certainly, Ms Clay. It is often called the just transition. A central responsibility of government is to overcome that risk. There are plenty of people who will be able to afford to make the transition themselves. There are plenty of people who have invested in solar panels already, for example, and are making the energy savings that come from that, and people who can afford to buy a new electric vehicle. The government has many roles, but one really important one is to make sure the people in lower income households do not miss out on those opportunities, because there is significant opportunity, as well as risk, there.

We have a number of programs in place currently and we have more coming. We have, in particular, the Home Energy Support Program. That is a \$50 million allocation that came out of the parliamentary and governing agreement that is designed to specifically target low income households in the ACT. This money is being invested in programs that will be particularly targeted at low income households, rental properties and government housing, and will see the support of things like ceiling insulation and upgrading from gas to efficient electric devices.

All of these measures are designed to, in my mind, do several things. The first is to reduce the energy bills of those households. The second is to reduce their emissions. The third is to actually improve their quality of life, because issues of insulation and/or more efficient heating systems all go to thermal comfort, which is really important for people's day-to-day quality of living.

There are a number of other programs. I would be happy to provide the committee with a short list, on notice, if that is suitable. Obviously, the energy concession and those sorts of things are designed as an immediate response. We have programs that we fund through St Vincent de Paul, where they go and visit households and help them go through an energy audit. They might do draught-sealing with them or they might replace an appliance. There are a range of programs targeted at low income households.

MS CLAY: What is the uptake at the moment?

Mr Rattenbury: I think, generally, pretty good.

Ms Malouf: Our low income program in 2021-22 supported 615 houses. That is

in-home assessments and the draught-proofing, and 273 houses accessed free curtains, which help with not only thermal comfort but also security and safety to the householder as well. That program has continued for a long time under different names and has been extended to include a renters' program to make sure that it is not just home owners that are included. 103 rental households got an in-home energy assessment and received tailored advice on things that you can do in the home, when you have a rental property, to improve your energy efficiency, your costs and your comfort.

MS CLAY: What is our communication strategy for reaching people that we are not currently reaching?

Ms Malouf: That is always a really hard one. We work with our communications team. We have a direct link to the community partners that have a better connections than we do. We work with ACTCOSS, St Vincent de Paul, Care Financial and those types of community organisations in both the design of the program but also the ongoing communication and how we get out to people and make sure that we are designing programs that their clients actually need.

Ms Magee: Ms Clay, we work with Ms Malouf's team and are involved in some of her meetings with representative organisations. Some of those practical questions that we ask those different advocacy groups are around the channels and the mediums that their clients or the people that they represent would best use for information. Is that through a video or is that through hard copy documents? That is something that we work with Ms Malouf's team on to make sure that we have a tailored range of communications materials.

In regard to the questions on renting, we also have a really great gas transition portal, which is about the transition off gas, and that has a section on renters. If you are a renter, you can go into the portal and say, "I am a renter of a townhouse," or "I am a renter of a single dwelling or an apartment. What can I do?" The portal outlines for them some tips for things that they can do around their home to transition, noting that they are not the owner of the property. We also ran this year, from May through July, a rental campaign, a campaign specifically to renters, and that helped them to identify some of the tips for things that they can do in their home to make their home either warmer or cooler, noting that they are not able to necessarily make some of those fundamental changes at their properties.

MS CLAY: Thank you.

MR COCKS: On measures to support renters and, in particular, the cost impact for their landlords of implementing different improvements to a property, often I hear from landlords that they feel they are being targeted or demonised, regardless of how well intentioned they are. How can we make best practice easy, rather than waving a stick at them all the time?

Mr Rattenbury: We certainly do not want to demonise landlords. That is not the target that communications intended for the programs. As we are working through things like the new energy performance standards for rental properties, we are working very hard to ensure that there is information for landlords as well as tenants

so that there is a clear understanding of the situation but also the right support programs are put in place, the industry support is there. Ms Malouf was speaking before about the work that is being done on training in the insulation industry to make sure that there is a good pool of supplies and everyone understands the program. They are the main responses at this point in time. Does that answer your question.

MR COCKS: It probably comes close. I think there is still a considerable level of concern amongst the landlords I meet with.

Mr Rattenbury: I think that is true. I was disappointed by a recent communication from the Real Estate Institute. If I was a landlord and had got that email I would have been quite concerned. We try to be really clear about the communication. People are most concerned about things they do not understand or do not have the full detail on, so the communication side of it is really important.

MR COCKS: Absolutely, and making sure that we have the right messages.

Mr Rattenbury: Yes, indeed.

MS LAWDER: Dr Ogden mentioned that one of the things you are doing is addressing nutrients from further up in the catchment area. Can you outline how you are doing that? What are you doing to reduce those nutrients?

Dr Ogden: Thanks. Several strategies. One is to stop the pollution from entering drains in the first place. That is being done through some of the pocket bioretention right up at the top of the catchments. Also, we are doing it by directing water into green space and letting the soils do the reconnecting of the urban run-off to the catchments. We are also trying to increase infiltration into soils and groundwater through these channel restorations. Those are the main ones.

Mr Burkevics: Dr Ogden, did you want to talk about the Leaf Collective program as well?

Dr Ogden: Indeed. It is not all about infrastructure. Almost the most cost-effective thing is the behavioural change work that we are doing. We are beginning to roll out the Leaf Collective, which is public education aimed at trying to get leaves and grass out of drains. If you add together thousands of kilometres of road times the amount of leaves and grass, that starts to come to a fairly large pollution load for Lake Tuggeranong. We want to try to address that through public education.

MS LAWDER: So you are providing funding to the Leaf Collective to roll that out?

Dr Ogden: Yes, we are.

MS LAWDER: As part of Healthy Waterways?

Dr Ogden: Yes; there will be a summer and autumn campaign this year. It is just kicking off this week, that contract.

MS LAWDER: Thanks.

THE CHAIR: Is that just for Lake Tuggeranong or across Canberra?

Dr Ogden: We are still determining the suburbs but there will be some suburbs in Tuggeranong and some suburbs in north Canberra, probably Gungahlin this time. As I say, it is the beginning of a larger rollout, so it is not a pilot anymore. This is the real thing and we are going to be tracking that very closely to see how well the effort performs in reducing pollution levels.

MR COCKS: Is that based on some data or analysis or modelling around where the greatest problems are coming from?

Dr Ogden: We know the locations of where pollution is coming from in the Tuggeranong catchment and we are making assumptions that that probably applies to other suburbs in Canberra. Our research through the University of Canberra has shown that the pollution is coming from pretty much everywhere. There are not point sources, except maybe for athletic fields. Because of that, what is everywhere is leaves, grass and fertiliser use, so that is what we are targeting. We are doing ongoing research, under our current contract with the University of Canberra, to figure out what the actual source of the pollution is, rather than just the location it is coming from. We should know that, hopefully, in 18 months.

THE CHAIR: Thank you very much. We will now draw this session to a close. Thank you, Minister Rattenbury and officials, for your attendance today. If you have taken any questions on notice, please get those questions to the committee secretary within five working days. If members want to lodge questions, please go ahead within five working days. The committee will now suspend for a short break and reconvene at 3 pm.

Hearing suspended from to 2.46 to 3.00 pm.

Appearances:

Barr, Mr Andrew, Chief Minister, Treasurer, Minister for Climate Action, Minister for Economic Development and Minister for Tourism

Chief Minister, Treasury and Economic Development Directorate

Engele, Mr Sam, Coordinator-General, Office for Climate Action

Lawton, Mr Kieran, Executive Branch Manager, Office for Climate Action

THE CHAIR: I would like to welcome to this session the Minister for Climate Action, Mr Andrew Barr, and officials. Welcome to the Standing Committee on Environment, Climate Change and Biodiversity annual reports hearing.

Please be aware that the proceedings today are being recorded and transcribed by Hansard and will be published. The proceedings are also being broadcast and livestreamed. When taking a question on notice, please state the words: "I take this as a question on notice." This helps in the transcription.

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

Mr Barr: Yes.

THE CHAIR: Great. Thank you. We will go straight to questions. My first question is: could you provide us with an update on the Sustainable Household Scheme?

Mr Barr: Thank you. Yes. I have data to 28 October, which is that there have been 6,958 installations completed. Loan applications now number 9,899. The total value of those loan applications has just ticked over \$110 million. On average, we are settling around \$2 million per fortnight. Some of the highlights are that we have now had 42.3 megawatts of rooftop solar installed under the scheme.

Of the 9,899 loan applications the most popular category has been rooftop solar, with 5,715. Solar and battery is 1,295; heating and cooling applications, 1,491; 663 battery storage; 564 hot water heat pumps; and 70 electric stovetops. Then we get to the EVs: 42 new, 35 used and 24 EV chargers. The balance of applications has been very strong in the electorates of Brindabella, Ginninderra, Murrumbidgee and Yerrabi. In Kurrajong it is less so, because a lot of properties in Kurrajong are not eligible for the scheme because of their very high land values.

THE CHAIR: Yes. Why do you think this scheme has been such a success?

Mr Barr: I think it is a combination of factors. The community is willing to make these changes, particularly with the financial supports that are on offer. Industry has stepped up. With more than \$2 million a fortnight, that is a significant flow and pipeline of work. We are now well into the second year of the scheme, so it is not a fly-by-night operation. It has not led to a ridiculous surge of unqualified people coming in, it is a steady, consistent pipeline of activity. I think also the cost of living

savings that come from participation in the scheme are very clear. More than five per cent of eligible households in the ACT have taken up the scheme, so it is really, really encouraging. Get the right policy settings and the right financial framework in place and people will very quickly make the shift.

THE CHAIR: What are the long-term prospects for the scheme?

Mr Barr: The government has a decision to make in the not too distant future around extending the amount of capital that is available in the scheme. The initial allocation will exhaust in this fiscal year, so we will be in a decision-making process around the extent of a further capital injection in the coming budget rounds.

THE CHAIR: Has there been any change? Is the uptake slowing down or have there been any shifts in the uptake?

Mr Barr: As word has got out it has probably slightly picked up in pace. If you start anything new there will be the early adapters. If the initial phase goes well then word of mouth in this city works particularly well. If anything, we are anticipating at least the current rate, if not slightly higher, through the coming period. There is no doubt that when there is public discussion about increases in energy prices, as there has been in recent times, that does prompt a higher level of inquiry and then action with the scheme.

That said, I think in the ACT context for the coming 24 months there will be a particular emphasis on gas to electric transition. ACT electricity prices are not going to go on the trajectory of other parts of the country because a decade ago we committed to a pathway of long-term, fixed price renewable energy contracts, so we are shielded against some of the anticipated increases that have been foreshadowed in other parts of Australia.

THE CHAIR: Thank you.

MR COCKS: Going to the EV section of the data you provided in particular, but also more generally, one of the big concerns I hear in the community is that initiatives like this can be quite regressive in their application. They benefit people who have already got quite a lot of money, who can already afford to make some of the changes that you are incentivising and who may have done so without that incentive anyway. What measures do you have in place to better target it?

Mr Barr: That is a very good question, and it has been front of mind in our thinking. Firstly, unlike other state and territory schemes, ours includes used EVs. We have a greater spectrum of vehicles available. Also, ours is a loan; it is not a grant. Other jurisdictions have just thrown cash—several thousand dollars, sometimes up to five—at exactly the people you are talking about, who perhaps would already have made the investment. One of the design features of the scheme has been to focus it on a cohort for whom the price of the vehicle is a big factor. We offer an up to \$15,000 interest-free loan. It does have to be repaid. Any money that is loaned is then paid back. It is not a grant to high income earners, for exactly the reason that you have highlighted.

I think the other important factor has been to extend its application beyond just brand-new vehicles. In this instance we also acknowledge that the supply of both new and used EVs is still very constrained in Australia as a result of a decade of policy failure at a federal level. You may contest that—

MR COCKS: To be fair, the supply of EVs internationally is quite limited.

Mr Barr: Certainly, other countries that have more supportive policy frameworks have been receiving the available supply. We would anticipate that, as more manufacturers bring out more models and scale up EV manufacturing, not only will there be an increase in supply, but the range and price of EVs will expand, and prices will fall.

THE CHAIR: I have one more question on EVs. Do you see it as a positive that the rate of used EVs is nearly approaching the rate of new EVs?

Mr Barr: It was a deliberate design feature to allow second-hand EVs into the scheme. I am anticipating that, as the government fleet, for example, is turned over, we will be adding to the supply of used EVs in the market. I know that there are a number of importers who are looking to bring into the Australian market product from overseas.

It is a model that has worked reasonably well in New Zealand. They do have a very good EV second-hand market, and we have seen the take-up there increase quite significantly. It is an interesting case study, because the New Zealand experience has been that their consumers have tended to want to have a very low capital cost of entry, but their fuel prices are considerably higher. In this instance you are asking people to spend more up-front, with a view that your operating costs will be considerably lower.

If it can work in a market like New Zealand's, there is certainly an opportunity for those sorts of principles to apply here. At the moment, let us be honest: we are talking, between the two, about 80 vehicles that have been supported. Clearly, the bulk of new EVs that are being bought do not require government assistance. One of the Tesla models is the third fastest selling car in Australia at the moment, or highest selling car in Australia at the moment.

What I am seeing, in terms of the decisions of vehicle manufacturers, is that there will be a significant increase in supply and diversity of product. That is coming sooner rather than later, and it would be accelerated further if Australia put in place tougher fuel emission standards, which I understand are on the agenda of the Australian government now.

MS CLAY: Minister, I have heard a competing theory that the high uptake of second-hand EVs at the moment is because second-hand ones are available, and people are on long waitlists for new EVs—for years. Do you think that is also contributing?

Mr Barr: Undoubtedly, the inability to access certain model types will drive people to choose an alternative, if they need to make a decision in the short term. Ultimately, we just need more supply of new and used. There is a role that government can play,

particularly in fleet ordering, in that we would turn over our fleet reasonably quickly, in order to both acquire newer and more efficient EVs and have a second-hand market. It is a very traditional structure for the ACT. The ex-government vehicle auction model has been tried and tested in Canberra for decades, and adding more EVs to that stockpile will be helpful.

I also note, clearly, that the government that has an even bigger fleet than the ACT is the commonwealth. I know, again, after 10 years of doing virtually nothing in this space, they are now, with the change of government, actively implementing a policy framework for the commonwealth government fleet.

MR COCKS: Chief Minister, you mentioned some data around the volume of Tesla sales versus other models. Are you able to point to a source for that?

Mr Barr: That is just in general media. If I get a break when someone else is talking, I will endeavour to google the article in which I read that.

MR COCKS: If someone could provide that source, that would be great.

Mr Barr: Yes, certainly.

MS CLAY: I would love to hear an update on the Big Canberra Battery.

Mr Barr: Why don't I invite Mr Engele to talk about that whilst I find that information source?

Mr Engele: I acknowledge the privilege statement. With the Big Canberra Battery, I have mentioned previously the three streams of work that we are progressing. One of them is the transmission scale. That is typically a big, industrial-size battery that connects in and is able to operate on the national energy market.

We have a two-stage procurement process for that. We ran an EOI in the last financial year, which shortlisted a number of firms. We have now gone to the second stage of that. We are in active procurement at the moment for that, with the shortlisted firms, and we hope to have those proposals submitted by the end of the year so that we can undertake the assessment.

The second stream is in relation to smaller scale batteries that are connected at schools and other government facilities, behind the meter. There is also a procurement process for that. It has closed and we are currently evaluating the tenders on those systems. There will be an evaluation report that will come up on that, and that will lead to the installation on a number of sites.

The focus on that is about trying to understand how the batteries perform in different scenarios. At a school with solar PV, how does the battery repay its energy costs, and repay its costs in a reasonable period of time? All of that work will be undertaken on those batteries.

The third stage is on neighbourhood-scale batteries. There are a number of commitments both from the federal government, on three neighbourhood-scale

batteries that have been committed to in the ACT, and from the ACT government, which is working on other battery systems. A series of them in Jacka have been announced, as previous commitments. Work is underway on those different battery systems at the moment. It is about understanding what the commercial models would be for them.

MS CLAY: Will we, in the contracts for these batteries, be including end-of-life recycling as part of those contracts?

Mr Engle: Yes. There are requirements around end of life and, for the transmission scale, also about how to remediate the site. One of the complexities in the contracts is that they are between 15 and 20-year term contracts being offered. We understand that if someone is operating a very large-scale battery system on those sites, they may then choose to extend the use of them, and have in place a means of making sure that when the systems are deactivated and all of those things are removed from the site, it is remediated and those systems are recycled.

MS CLAY: That is really good to hear. Are we now doing that as a standard contract term with all of our government solar panels and battery projects?

Mr Engle: I am not sure about that. The Big Canberra Battery contracts are not standard because they are quite complex. I would have to take that on notice and confirm it, in relation to solar PV contracts.

MS CLAY: I would love you to take that on notice. That would be very convenient. It is interesting that, in 2022, if we require someone to recycle something like a battery or a solar panel, they may well not be recycling until 2040 or 2050, so it is quite long term. Do you think that giving that certainty to the industry that we intend and require recycling is likely to help the recycling industry generally?

Mr Engle: I think it would. Setting clear signals from government about the expectations, particularly in other areas of the circular economy, has been important. We certainly see that in other areas, such as banning the export of plastics, which is currently taking place. That has spurred the industry. There are some technical challenges, which are being overcome at the moment, in relation to recycling solar PB. Similarly, I know that research at the ANU—BSGIP—is looking at opportunities to recycle batteries. Quite a lot of the materials are high value, so there are definitely economic incentives to recycle them.

MS CLAY: Yes, I know there are a few factories around the country that are doing it. Is it important for public confidence? It comes up a lot, when I am talking to people about new technologies. They are very concerned about the recycling of panels and batteries. Do you think that it is important for public confidence?

Mr Barr: For a section of the community, absolutely. Yes, it is a frequently asked question, often both as a point of reassurance and to deflect a point of political attack. There is a section of the community who hate everything renewable and will look to find any chink in the armour; they try and suggest that the transition to more sustainable sources of energy generation and storage is not what it purports to be, and try and use the argument around end of product life as an example to attempt to prove

a political point.

It is important both to address those sorts of, shall we say, politically motivated attacks on necessary transition and provide reassurance to those who are genuinely interested in making a difference but want that reassurance that the product they are investing in will achieve not only the short-term objective but, ultimately, will fit into a circular economy.

MS CLAY: Thank you.

Mr Barr: I have the answer to Mr Cocks's earlier question. My source is the Federal Chamber of Automotive Industries media release dated 5 October. The headline was: "Strong Electric Vehicle Sales Recorded in September 2022". The data shows that the highest selling model in Australia was the Toyota HiLux, with 5,170. Model No 2, the second highest seller, was the Ford Ranger, with 4,890. In place No 3 was Tesla's Model Y, with 4,359. In fourth place, out of interest, was Mazda's CX-5, with quite a significant drop, to 2,439.

That particular Tesla model is not far off being the No 2 selling vehicle in Australia. I do not have ACT-specific data, but, looking at the fact that overall EV sales are much higher in the ACT than they are in Australia, I think there is reason to believe that that particular Tesla model might be in second place, if not in first place, in the ACT. I know that we do sell a lot of Toyota HiLuxes here, but I suspect that the Tesla model, if it is not already top of the charts, is definitely heading that way.

MR COCKS: I have another line of questioning on procurement, but I will ask a quick supplementary on Ms Clay's line. We have heard recently about some of the challenges with recycling, broadly. You must have end products that can come from the recycling process. One of the other big problems is transport. Making recycling economical needs transport to the places where the product will be recycled. Have you explored what the extra factors in that recycling are? How do you get the product to a recycler and what will be constructed at the end?

Mr Barr: Is this in reference to solar panels?

MR COCKS: To solar panels and batteries.

Mr Barr: There are not that many solar panels that are at end of life at this stage, but there would be some that would be approaching it. With batteries, I do not think that any would be; certainly, nothing that is within our scheme.

Mr Engele: Not in volume, no.

Mr Lawton: I have read and understood the privilege statement. With the battery recycling, I would refer the committee to a CSIRO study called the *Australian landscape for lithium-ion battery recycling and reuse* report, which looked closely at this matter and predicted that there will be a market for this, as the batteries that we put in now come to end of life in 10 to 15 years.

The question is a good one, but it is premature, in that they are saying this is a

growing industry, for batteries. With respect to solar, there are establishments; there is one in Adelaide, for example, that is recycling solar panels at the moment—not in the ACT, that I am aware of. The normal transport would apply in that situation. You could imagine that, as we are putting in so much rooftop solar and so much solar in these big farms, these industries will develop around Australia.

MR COCKS: It sounds like you expect there to be future capacity, but we do not know what that is going to look like yet.

Mr Lawton: Yes.

Mr Engele: I understand that environment ministers across Australia recently agreed on work to undertake product stewardship for solar PV, so it is a national issue that is being progressed across all jurisdictions.

MR COCKS: Following on regarding the procurement process for the big battery, I understand that the market-sounding process closed in February this year. Are you able to give me an update on how that has informed things? Also, specifically around the procurement process, what is Major Projects Canberra's involvement, if any?

Mr Engele: That process that you mentioned was the first EOI stage. We also undertook an initial study with the battery school at ANU, to get a better understanding of the different options. That occurred prior to that. The EOI stage tested a number of questions about how individual providers would be able to engage with the ACT government.

The way that the procurement works is that there are a series of contracts that essentially underpin the finances of private sector providers. The ACT is not currently going out and purchasing the whole battery, in terms of its capital component. It is a financial product that allows private providers essentially to use that to reduce their cost of capital and then build the battery on that basis.

The ACT gets a percentage of any returns above a certain amount, so a lot of that work about refining exactly what would be in those contracts, what the right schedules for uptime for the battery system would be, and a number of things in relation to decommissioning the battery—all of that was part of that EOI process, to better understand what the market was willing to provide.

The second stage looks at the pricing. We are asking, as part of that, essentially what the price would be and what the different returns would look like, in addition to being able to demonstrate an ability to deliver on all of those aspects that we explored as part of the EOI.

Mr Lawton: That has covered it off pretty well. We are on schedule, and going through quite a long process, as Mr Engele described. That request for proposal is the second stage. It actually closes on 22 November, quite soon, and we will have several months of evaluation before going into contracting.

MR COCKS: What about the question around Major Projects Canberra—how, and to what extent?

Mr Barr: They are not involved.

Mr Lawton: Yes, that is right.

Mr Engle: That is correct. They are not involved as part of it because of the PPP. We have been informally working with them, to better understand what the right point for them to be involved in the project would be, which would be after this procurement phase and when we are looking at the delivery. We would be utilising their project management expertise at that point.

MR COCKS: Do you have a time frame for when construction will commence on the first large-scale batteries, and when will we see 250 megawatts online?

Mr Barr: A project that was procured under one of our previous renewable energy contracts, the Capital Battery, is now well progressed. There are approved development applications and the like. It is a precursor to some of the streams that are contained within the Big Canberra Battery project. We have largely been talking about stream 1, which is the large grid connected batteries that are primarily located at key transmission points.

There are two further streams, as part of the Big Canberra Battery project. There are what I would describe as medium-sized batteries at government sites—for example, schools, maintenance depots, bus depots and those sorts of things—and there are the neighbourhood-scale batteries that are in stream 3. There are projects that will be supported under the Big Canberra Battery framework, and there are also another three projects that have been committed to by the federal government under their community battery program. They are, obviously, talking with us about that.

Ultimately, all of these batteries, whether they are procured under the Big Canberra Battery program, under an earlier program or under the commonwealth program, will all operate together as part of a distributed Big Canberra Battery network. The time frames are sooner rather than later, in relation to the Neoen project, which is well advanced. These other ones are still to be procured, so they are still a number of years away.

The community-level batteries, some of which I imagine are under the commonwealth program, are in the time frame of a couple of years, I think. The officials are nodding there. The stream 2 ones, the government site ones—

MR COCKS: Chief Minister, I am conscious of the time. You have said sooner rather than later. Hypothetically, when the battery is full, for approximately how long would the battery provide electricity for the whole of Canberra if there was a total blackout—that 250 megawatts? I know that there are a range of variables, but can you give a ballpark figure?

Mr Barr: I think it is clear that we will well exceed the 250 megawatts, given that Neoen have already confirmed they are already over 100 megawatts. We have these other projects. Depending on the nature of the market disruption—the blackout, as you described it—if it was entirely territory wide, it would be hours. If it was just a

section of Canberra that was blacked out, it would extend the duration. With the exact numbers, as in exactly how many hours and minutes, we will not know that until the procurement is finished. But this does more than five minutes. It is considerably longer; it is hours.

THE CHAIR: Thank you so much for appearing today, Chief Minister and officials. If you have taken questions on notice, please respond to the committee secretary within five working days. Thank you very much for your time.

The committee adjourned at 3.31 pm.