



**LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL
TERRITORY**

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

(Reference: [Inquiry into annual and financial reports 2019-2020
and ACT budget 2020-2021](#))

Members:

**DR M PATERSON (Chair)
MR A BRADDOCK (Deputy Chair)
MS L CASTLEY**

TRANSCRIPT OF EVIDENCE

CANBERRA

THURSDAY, 4 MARCH 2021

**Secretary to the committee:
Ms A Westgate (Ph: 620 53886)**

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	48, 66
Environment, Planning and Sustainable Development Directorate	66, 83

Privilege statement

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Amended 20 May 2013

The committee met at 1.01 pm.

Appearances:

Cheyne, Ms Tara, Assistant Minister for Economic Development, Minister for the Arts, Minister for Business and Better Regulation, Minister for Human Rights and Minister for Multicultural Affairs

Chief Minister, Treasury and Economic Development Directorate

Sargent, Mrs Narelle, Senior Director, Office of the Environment Protection Authority, Construction, Utilities and Environment Protection Branch, Access Canberra; Statutory Office Holder, Environment Protection Authority; Delegate for Lakes; and Clinical Waste Controller

THE CHAIR: Good afternoon, everyone. Welcome to the public hearing of the Standing Committee on Environment, Climate Change and Biodiversity into the annual and financial reports 2019-20, and the estimates for 2020-21. In the proceedings today we will examine the annual reports, expenditure proposals and revenue statements for the Environment Protection Authority in relation to budget statements B, the Minister for Climate Action in relation to budget statements B, and the Environment, Planning and Sustainable Development Directorate in relation to budget statements E.

Before we begin, on behalf of the committee, I would like to acknowledge that we meet today on the land of the Ngunnawal people. We respect their continuing culture and the contribution that they make to the life of this city and the region.

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 webstreamed live.

When taking a question on notice, it would be useful if witnesses could use the words, "I will take that as a question on notice." This will help the committee and witnesses to confirm questions taken on notice for the transcript.

In this first session this afternoon, we will hear from the Minister for Business and Better Regulation and officials. I remind witnesses of the protections and obligations afforded by parliamentary privilege, and draw your attention to the privilege statement on the pink sheet. The provision of false and misleading evidence is a serious matter, and all participants today are reminded of this. Could you please confirm for the record that you understand the privilege implications of the statement?

Ms Cheyne: Yes.

Mrs Sargent: Yes.

THE CHAIR: As we are not inviting opening statements, we will now proceed to questions.

Ms Cheyne: Chair, if I may, this is not an opening statement. The committee probably established this with other ministers in previous hearings, but could I confirm that policy decisions are not within my remit. Operational things absolutely are.

THE CHAIR: I cannot guarantee that you will not get a policy question, though.

Ms Cheyne: All right.

THE CHAIR: My first question today is: did the EPA observe any significant changes in the numbers and types of complaints received over 2020, compared with previous years, that may be attributed to work or lifestyle adjustments resulting from COVID?

Ms Cheyne: I will hand over to Mrs Sargent, who will be able to speak to that in more detail.

Mrs Sargent: In terms of complaints, we saw the same trend of complaints during COVID compared to non-COVID. Our complaints are shown in the annual report in terms of the tables. You will see that there was a slight decrease—about a six per cent decrease in noise complaints, offset by a slight increase in complaints about air quality or air pollution and light pollution.

I suppose that, because you have 100 per cent, when something goes down, something else has to go up. Also, that period of 2019-20 was when we had the bushfires and the dust storms. That would be where the adjustment is. In terms of complaints, we did not see a variation as a result of COVID.

THE CHAIR: That is interesting; thank you.

MS CASTLEY: What is light pollution?

Mrs Sargent: See these lights? At night-time sometimes premises leave lights on for too long and they impact on the amenities. They might be from sporting grounds or if you are in a townhouse complex—that type of thing.

Ms Cheyne: Basically, it is light shining through that is annoying you.

MS CASTLEY: It does seem that there was a big increase. In 2017 there were 40 complaints, 59 in 2018-19 and 72 in 2019-20. That seems like a lot. What are your thoughts?

Mrs Sargent: In terms of the percentages, if you look at the bar graph, you will see that there was not much of a change in the percentage. We had 2,529 complaints overall. So it is a low number, a low percentage.

Ms Cheyne: As a proportion of the overall complaints, you are right; there were 40 in 2017-18, and that constituted one per cent of total complaints that the EPA received. In 2019-20 it constituted three per cent of all complaints received.

MS CASTLEY: For light pollution. I have more about air pollution. It is a similar question, I suppose. The figures are 370, then 357 and 426.

Mrs Sargent: Sorry, for which ones?

MS CASTLEY: Complaints about air pollution.

Mrs Sargent: That is on par, so it just trends similarly. As I said, there was a slight increase in 2019-20 as a result of the bushfires and the dust.

MR BRADDOCK: I have a question in terms of monitoring waste stockpiles across the ACT. Could you explain to me what the role of the EPA is in that space?

Mrs Sargent: If the facility is a licensed facility, if they hold an environmental authorisation with us, we will set limits in terms of the volumes of waste that they can have. We also have stockpile guidelines for waste facilities. Some of the guidelines are to ensure that the waste is moving off the site. It is also to do with the fire hazard. It depends on each facility and the requirements that are in their environmental authorisation.

MR BRADDOCK: We set limits and guidelines, but do we actually monitor how much is there and whether they are abiding by that?

Mrs Sargent: Yes, we do. Within their environmental authorisation they have monitoring requirements and they need to report to us. We do reviews of their environmental authorisations. We go out and do inspections and audits in accordance with our licence agreements.

MR BRADDOCK: Do stockpiles tend to be increasing or decreasing? What is the general trend there?

Mrs Sargent: On specific sites?

MR BRADDOCK: Yes.

Mrs Sargent: It depends on each facility. However, they have to stay within the limits that are in their environmental authorisation. To move the waste off the site, part of it is about trying to move it off so that they can bring more in to sort. Most of them are trying to sort different components of the waste stream, so that they can go back and be re-used or recycled. They need to be moving it over.

However, with the “sword” ban on waste, some of the waste is not turning over as fast as we would like, so it is not moving off the site as quickly as it could be. That is, I suppose, a challenge for the whole of Australia. Within any jurisdiction, that is the same situation in terms of things not moving off as much. However, we are still looking at “reduce, re-use, recycle”. One of the best ways is to eliminate or reduce the waste by not using so many products. There are definitely guidelines and there are requirements in their environmental authorisation.

MR BRADDOCK: If it is starting to build up, does it mean that they have exceeded

the amounts that are specified within their authority or have we adjusted their authorities upwards?

Mrs Sargent: If that happens, we will take enforcement measures. We like to do engagement and education. We will work with them and, if need be, we can take a higher level of enforcement and issue an order on them to stop accepting waste, or even issue an infringement or take further action.

MR BRADDOCK: Have we taken any enforcement action over the last 12 months?

Mrs Sargent: Not for waste facilities.

MR BRADDOCK: I have another question in terms of the remediation of those sites. Is there a requirement for the operators to have a bond or some sort of financial commitment in order to remediate the sites? Is that under their authority?

Mrs Sargent: It depends. There is not a requirement; however, we can require that they have a financial assurance on a site, if need be.

MS CASTLEY: I have some questions on enforcement actions. On page 251 of the report it says that there has been an increase from two in 2017-18 all the way up to 15 infringement notices handed out. I am wondering what the increase is about.

Mrs Sargent: Part of it is the Environment Protection Authority having a higher profile out there, doing more inspections. We have managed to move to new technology, whereby we have a handheld application called Survey123. It makes it much easier, in terms of streamlining the process, to do inspections and audits because it is a mobile app. Instead of having to come back and write things up, it is held in a mobile app. It has allowed the officers to be out and about and doing proactive inspections because they are not having to do that follow-up paperwork.

The community also makes us aware of activities, so that we know where there may be noncompliances occurring. I think it is about the dedication of the community, the education and engagement with the community and the diligence of the officers in the Environment Protection Authority who go out.

MS CASTLEY: How many officers are there?

Mrs Sargent: In total, the whole staff of the Environment Protection Authority is 17 FTEs, and it is 18 staff because there is one job-sharing arrangement.

MS CASTLEY: Are they the infringement—

Mrs Sargent: The main ones who are out doing inspections are four in the environment protection team.

MS CASTLEY: Four inspectors. One of the infringements added up to \$10,925, with one penalty as low as \$200. Is that enough of a deterrent for people? \$200 does not seem to be a lot.

Ms Cheyne: Just to clarify, that first figure is the total number of—

MS CASTLEY: The \$10,000?

Ms Cheyne: Yes.

MS CASTLEY: Of all of them?

Ms Cheyne: Yes.

MS CASTLEY: The 15; yes, that is right.

Ms Cheyne: Yes, so if you add up all of that, that is \$10,925. The maximum that has been issued is \$1,000 and the lowest is \$200.

MS CASTLEY: My question is: is \$200 enough of a deterrent to stop people doing it again? Has that been an effective fine amount?

Mrs Sargent: That was for a resident. It depends on the circumstances of each resident as to whether or not it is a deterrent. However, we engage with the person who has the activity that is making the noise. Generally, yes, it is enough because we all want to live together with our neighbours. One of the things is that we are moving to higher density, and quite often people are not aware that they are impacting—

MS CASTLEY: Doing the wrong thing.

Mrs Sargent: the noise because—

MS CASTLEY: Did that \$200 involve a noise complaint?

Ms Cheyne: Yes, it was noise from an air conditioner. Mrs Sargent can correct me if I am wrong; the penalty amount is proportionate to what has happened. That is why, if you go to the detail, with the noise from an air conditioner, that is residential, and it is \$200, but noise from building works is \$1,000.

MS CASTLEY: It is different.

Ms Cheyne: You can imagine, with the sound that you might be hearing, an air conditioner can only possibly get to a certain level of loudness, whereas building works, you can imagine, could be—

MS CASTLEY: With the one that is “noise from weights, \$1,000”, did that involve a resident? Can you tell me a bit more about that one?

Mrs Sargent: The weights? No, that was a gym.

MS CASTLEY: A gym in Harrison.

Mrs Sargent: Yes, as in—

MS CASTLEY: So it was not in someone's backyard?

Mrs Sargent: No, it was not in someone's backyard.

MS CASTLEY: What was happening there? You hear music blasting from a gym, but—

Mrs Sargent: It would probably be in a mixed-use development, where you have the gym in with residences. If the sound is not attenuated correctly—that means having the proper sprung floor with the proper rubber matting or whatever to mitigate the sound of the noise—you get the dropping of the weights. After they do some of the overhead press and that sort of thing, some people just drop the weights on the ground instead of placing them on the ground; or when they have finished using them, they just drop them on the ground instead of putting them back into the spaces where they are supposed to go.

MS CASTLEY: In that instance, is it residents that complain?

Mrs Sargent: Yes.

MS CASTLEY: How do you monitor that? Do you do spot checks, or do you just rely on residents to keep complaining?

Mrs Sargent: The complainants will call Access Canberra. It is put through to the Environment Protection Authority and the Environment Protection Authority deals with it appropriately.

MS CASTLEY: Do we know how many complaints this one got in particular before it got its fine?

Mrs Sargent: Usually, with a residential one, you have to prove that you have an affected person, so that it is above the noise level, and then find out that they actually have breached the noise level that they are allowed to have. I am not too sure how many complaints there would have been. It is not based on complaints; it is based on breaching the noise level that is allowed.

MS CASTLEY: How does it get to the point where it is decided that \$1,000 is the fine? How do you go from a fine of \$200 for residents to \$1,000 for a gym?

Mrs Sargent: That is set by the magistrate's fee determination. It is determined by another piece of legislation. The penalty units are in the legislation; then the magistrate's fee determination sets the amount for a penalty unit. We do not decide what the amount is.

MS CASTLEY: I would love to know—you can take it on notice—how many complaints came through on this one?

Mrs Sargent: On that particular—

MS CASTLEY: Yes, on the Harrison incident—how the residents were affected and

how they were impacted by this.

Ms Cheyne: With the first part of the question, we can absolutely take that on notice. With the second part—

MS CASTLEY: I am just trying to understand what happens.

Ms Cheyne: we cannot necessarily guess how a resident was affected. The noise has got to a point where they have made a complaint to Access Canberra, who refers it to the EPA. It has to be an affected person in an affected place. The EPA then goes out to measure that noise.

MS CASTLEY: So it is a noise measurement, not a distressed—

Mrs Sargent: No. It is about the impact—for example, if you are a shiftworker or they are doing it at 5 am so that it disturbs your sleep, and you get disturbed sleep.

MS CASTLEY: Do you do follow-up checks? The fine is imposed; do you wait for more people to complain again, or are you following up with the gym to make sure that they are not allowing people to drop weights?

Mrs Sargent: Usually, the enforcement action is enough of a deterrent for the activity manager—the gym—to do something to stop the noise; but we still engage with them to check that there are no noise issues.

THE CHAIR: Flipping Leanne's questioning the other way, there are a lot of complaints in relation to enforcement action. Obviously, you have to prove what you are saying—

Ms Cheyne: Do you mean a lot of complaints that lead to enforcement action?

THE CHAIR: 2,529 complaints; is that right?

Ms Cheyne: Yes, that is right.

THE CHAIR: And 15 infringement notices.

Ms Cheyne: Yes.

THE CHAIR: Obviously, you want to give people a warning first.

Ms Cheyne: Access Canberra, across all of its operations but including in EPA, has a model of engage, educate and enforce, in that order. It depends on what it is. If there is paint in a stream, you will not have a little chat about it; you will probably go quite quickly to enforcement. Often, with things like noise pollution or light pollution, it may well be that the body or the individual creating that noise may not even be aware that they are affecting another person. That is why there is this engagement and education model first.

Mrs Sargent: I will clarify something. With Access Canberra, the complaints

management team received 2,529 complaints related to EPA matters. Of those, they are not all referred to the EPA. They will manage some of them.

In terms of the process, the complaints management team has a triage system. Generally, in the first instance, they will send an advisory letter to the activity manager. The activity manager is the person who the complaint is made against. For example, it would be the resident who has the noisy air conditioner, or the building company who is making the noise.

If it is a second complaint about a resident-to-resident issue—a noisy air conditioner—there will be a follow-up letter, a second advisory letter. That might be just in case they did not get the first letter. Sometimes you think it is junk mail and you say, “I’m not going to read that.” So in case they did not get the first letter, we will give them a second letter. Within the letter it suggests that they have a conversation with the neighbour, because they may not be aware that the air conditioner is impacting on them or whatever the matter is. If they are not comfortable with having a conversation, they might want to call the Conflict Resolution Service to get some tips about having a conversation, to go through that process. If not, on the third complaint, it comes through to the Environment Protection Authority, and my officers will then deal with the matter accordingly.

If it is a resident-to-business—we do not usually have a business-to-business—or a business-to-business, the process is the advisory letter; then on the next complaint it comes through to the Environment Protection Authority. With resident-to-resident complaints, we are trying to get the community to engage with each other and reduce having the Environment Protection Authority turn up or, for example, the police turning up, if it is people noise, so that those resources can go to the higher risk of harm areas as opposed to those areas. However, we do, as you can see, take regulatory action. But we like to use the engage, educate and enforce model.

Ms Cheyne: Generally, particularly if it is resident-to-resident, these are your neighbours that you have to live with, and potentially you will be living next to them for a long time. To escalate immediately to “knock, knock” from an official, it may not make things very pleasant for anybody in the longer term. Where neighbours can manage the issue themselves, and simply have that conversation, we really encourage that in the first place.

MS CASTLEY: Is that for businesses as well—having this educate model first?

Mrs Sargent: Yes, that model.

MS CASTLEY: A warning and all of that?

Mrs Sargent: Yes.

THE CHAIR: With the amplified noise, is that music? Is that what it is talking about?

Mrs Sargent: Basically, yes.

THE CHAIR: Are there any emerging EPA threats or changing technologies that complaints are arising over? Are there any different things coming through?

Mrs Sargent: The trend is very similar from year to year. Basically, in the summer period, it is complaints about noise. That can be amplified music, parties and things in the backyard. Because we are being more active, you get an increase in the summer period. In winter, the trend is for complaints about air quality, because going into autumn you have backyard burning of leaves; then you have the wood heater issue.

In terms of the trends of complaints, it is very similar year in, year out in regard to those. Some of the locations might change. For example, complaints about building and construction depend on where the building activity is. Generally, as you can see from the bar graphs in the annual report, it trends very similarly from year to year.

THE CHAIR: With the noise complaints related to parties, I would assume that people would call the police to make a noise complaint. Do they call the EPA?

Mrs Sargent: It depends. Quite often, with a party, there is amplified music. So you have the amplified music bit; then you have the people noise, and behaviours associated with it. They might call either. It depends on the situation as to who will respond. My officers are not armed, so to speak. Their job is to go in and take a noise reading, to see if it is above the noise level. That is one of the reasons that we do the second advisory letter, if there is noise, because it could have just been a one-off party or something, and they did not realise.

Back in 2018, because of this trend of amplified music being so much of an issue, we did a proactive campaign around noise. We now have a noise portal. You can pop on, and there is a whole stack of different information there. One of the things that we introduced was the party form. If you are having a party, you fill in the party form, and it gives you an information sheet that you can give to your neighbours to let them know, "We're going to be having a party; it's Fred's 21st. This is when the party's going to happen. We invite you to the party or suggest you may wish to do something else. The party is going to finish at about this time."

It is about having that courtesy, which would have happened back in the old days when people were much more connected to who their neighbours were. It is about, out of courtesy, letting people know that it is happening. As you can see, we have had a six per cent reduction in complaints about amplified music. Part of it was because people were not aware that they were having an impact, if you like, on their neighbours. It is about having that sort of engagement model, and working with the Conflict Resolution Service.

I remember one great story that came out in terms of the neighbours not talking to each other because when the neighbours first moved in, they did not wave. It was because they were short-sighted, and they did not know. They went to the Conflict Resolution Service, and now they are best friends.

MS CASTLEY: Someone complained because their neighbour did not wave?

Mrs Sargent: No, it was why they did not talk to each other. They did not talk to each

other because this happened when they originally moved in. When they had the complaint about the noise, they did not talk to each other and say, “By the way, your air conditioner is a bit noisy.”

Ms Cheyne: Yes, they did not have that established relationship where they felt they could approach each other.

Mrs Sargent: Exactly.

MS CASTLEY: You can hop online and do all of this. Given the fact that the infringement notices have increased, I would say greatly, from two to four to 15, what are we going to do about that?

Mrs Sargent: With the enforcement actions for 2019-20, there are none for noise from amplified music; it is actually on the building sites. The building sites are one of our higher risks for noise, and for sediment and erosion control. When you do not have the sediment and erosion controls in place, that is where you can impact on the water quality. They are a higher risk; and, as you know, in Canberra, one of the biggest industries in Canberra is the building and construction industry.

MS CASTLEY: I would like some of those figures on the Harrison one, if you could take that on notice.

Mrs Sargent: For the Harrison gym?

Ms Cheyne: Yes, how many complaints.

MS CASTLEY: How many complained, and what was the main person’s problem. Were they shiftworkers et cetera? If I could put that on notice, I would really appreciate it.

Ms Cheyne: Sure.

MR BRADDOCK: Coming back to the infringement notices, for example, construction site waste entering in a waterway, \$100 and the fine for littering is \$200. Do you think those are proportionate in line with community sentiment?

Ms Cheyne: We are verging into a policy discussion. It really depends on exactly what it is. I do not have the detail about the waste from the building site entering the waterway, but you will see in other areas that the fine for pollution of a waterway is \$875. There is also another fine for waste from a building site that entered a waterway that is \$500. It may have depended on exactly the nature of the waste and how much there was. Within the penalties there is discretion based on the nature of the issue.

Mrs Sargent: So it distinguishes between an individual and a company. As I said before, the penalty units are in the Environment Protection Act and the amount associated with the penalty unit is set in another piece of legislation. So that is moving into the policy and legislation area, which is outside my remit.

MS CASTLEY: Page 246 shows that in 2019-20, 27 environmental authorisations

were issued. At the same time, 117 existing authorisations were reviewed. What can you tell me about those that were varied? Why were they varied?

Mrs Sargent: Environmental authorisations can be varied for a couple of reasons—the authorisation holder may have requested a variation. It can sometimes be a variation to their name. So they might have changed the name of the company or who the contact officer was. It might be a change that was requested by us following a review in terms of if a new policy comes online and we are referring to an old policy, we will update their environmental authorisation accordingly. Environmental authorisations are reviewed at least each three years, depending on the nature of the authorisation.

MS CASTLEY: How many are there?

Mrs Sargent: There are 304.

MS CASTLEY: Were any revoked or withdrawn in the year?

Mrs Sargent: People can surrender environmental authorisations.

MS CASTLEY: Did you revoke any?

Mrs Sargent: No, we did not revoke any.

MS CASTLEY: At page 247 two authorisations were issued for motor sports. Can you tell me what they were?

Mrs Sargent: I would have to check exactly which facilities they were issued for.

MS CASTLEY: Can you take that on notice?

Ms Cheyne: Yes, we can take that on notice.

MS CASTLEY: And petroleum storage? There was one, then two and now four in 2019-20.

Mrs Sargent: They are new service stations.

THE CHAIR: I looked up bore licences on the ACT government website and they seem very much focused on older areas of Canberra around Parliament House. Are they residential licences?

Mrs Sargent: Yes, some residents have bore licenses. They have big gardens they wish to water.

MS CASTLEY: What is a drillers licence? There were 16 of those?

Mrs Sargent: That is the person who digs the hole to put the bore in.

MS CASTLEY: So 16 new drilling companies asked for licences or were they

licenses for 16 new bores? This is at page 254.

Mrs Sargent: They were people requesting to be licensed to drill.

MR BRADDOCK: I notice that you had 426 complaints of air pollution in the year but there are no infringement actions taken against any air pollution. What is the process and what are we doing?

Mrs Sargent: If you are impacted by someone's smoke from their chimney, you ring Access Canberra. The person with the smoky chimney will be sent a letter to say that someone complained and these are some tips in terms of how you operate your wood burning heater correctly. They then send a second letter. If there is a third complaint, an environment protection officer will look at the chimney and then there is a process in terms of how we determine whether it is compliant. We use the engage, educate, enforce strategy. Hopefully, the neighbour might say to the nearby resident, "Did you know your chimney seems to be a bit smoky?"

We also do the Burn Right Tonight campaign. Coming into winter each year we like to raise the profile about the tips in terms of Burn Right Tonight. One of the key things is about the maintenance of your wood heater. As you know, usually the cold period kicks in either Anzac Day or Easter. So before you want to use your wood burning heater, you should clean the flue and check that it is in operational order. It is a bit like any other piece of equipment—you need to clean and maintain it.

We do that education so people are aware. However, the Tuggeranong Valley has an inversion layer. So on the still nights when there is no wind to disperse the wood smoke and it is on a very cold night and lots of people are using their wood heaters, you can see that the smoke hangs around and you might get more complaints about the wood smoke.

MR BRADDOCK: I am assuming that if you did not get through to the enforcement action stage, that all those 436 complaints were resolved earlier in that process?

Mrs Sargent: Yes. Well, hopefully.

MR BRADDOCK: You said that an EPA officer may assess whether a chimney is compliant or noncompliant. Is it possible to get figures on how many were found in either category?

Mrs Sargent: If it is not compliant, we would have listed it in the enforcement actions. We do a warning letter and then if it is non-compliant, we might put an order on not to use it. We do not necessarily go to a fine; it might be that you cannot use it until you make it compliant.

MR BRADDOCK: So how many of those orders did you issue?

Mrs Sargent: No, we did not. The figures are reported in there. As you said, hopefully they worked it out themselves.

MR BRADDOCK: The complaints in my inbox seem to indicate otherwise, and that

is why I am asking, to understand the process.

Ms Cheyne: Over summer?

MR BRADDOCK: No, with the onset of winter. I was looking at one this morning literally before I came in here. It was from Kaleen, so part of Belconnen where there are more likely to be wood fire heaters. As an asthmatic they were concerned about the onset of winter.

Mrs Sargent: So they were not complaining about someone using their heater at the moment?

MR BRADDOCK: Not specifically at this moment, but, based on the last winter, they were complaining in terms of what they expected to come.

Ms Cheyne: You might be aware of the Actsmart wood heater replacement program which ran for a while. That is another minister's portfolio, but you might like to get some more information about that program, which encourages people to replace wood heaters that are not efficient.

MR BRADDOCK: That is fantastic. I am also concerned about new wood heaters that are installed and are not controlled.

Ms Cheyne: I suggest you raise that with that minister.

MS CASTLEY: Going back to the noise complaints, do you get complaints from people where there is a building site right next to them? Is that in this report?

Mrs Sargent: Yes, so that is construction. So in each of the pie graphs the construction is blue.

MS CASTLEY: Environmental protection agreements entail moderately significant risk of environment harm. These used to last for three years but they have moved to an unlimited period as the result of a request from the Master Builders Association to reduce red tape. What were the association's concerns?

Mrs Sargent: It is a class B activity when they do construction greater than 0.3 hectares. A lot of the new big developments have to enter into an environmental protection agreement with us. Because it takes longer—they are doing the constructions for quite a long time—they had to keep reviewing them, whereas an environmental authorisation is issued for an unlimited period. So they said, "Because we are not changing the activity, could we look to move to an unlimited period, the same as an environmental authorisation?" That was able to be catered for.

MS CASTLEY: Three protection agreements were issued for contaminated sites but there were none in the years before that. Can you talk to me about those three? That is at page 248.

Mrs Sargent: I will have to take that on notice to get the details of those three agreements.

MS CASTLEY: Are they increasing? It is almost out of the blue—we have gone from nothing, nothing, to three.

Mrs Sargent: We do not get many of them. We have 42 environment protection agreements for contaminated sites. They are not ones that we get very often. I suppose it was just a coincidence or something that we have three.

Ms Cheyne: It is 12 for contaminated sites?

Mrs Sargent: Sorry, I was reading the wrong total. As I said, we do not have many of them and for some reason we had three in that period.

MS CASTLEY: What is a “contaminated site”?

Mrs Sargent: A site that has been assessed as being contaminated. It will have a high level of some sort of contaminant which is not a naturally occurring substance in the environment. It might be to do with a hydrocarbon, which is something you find in petrol, so it might be for an old service station site. Asbestos is not a naturally occurring substance. It is the type of thing that is not naturally occurring in the environment but they now exist in the environment because they come from other products.

MS CASTLEY: Do we expect that they will be cleaned up and become non-contaminated or do we just accept that these sites in Canberra will remain contaminated sites forever?

Mrs Sargent: No. Some are on the register and processes are in place to have them remediated. It depends on the time frames. Hydrocarbons take a long time to not be in the environment, but they are monitored.

THE CHAIR: Does every development site have to have an erosion and sediment control plan or is it only if there is erosion?

Mrs Sargent: No; if it is larger than 0.3 hectares, they have to have a sediment and erosion control plan.

THE CHAIR: How often do you inspect a site for erosion and to make sure they are managing their plan?

Mrs Sargent: We do proactive inspections in terms of looking at those areas. It depends; we might be notified by a member of the community who thinks that there might be something there. You have seen the big developments rolling out in the Molonglo Valley and that type of thing. Because the officers are out there looking around, that is why they can do it; and in terms of the numbers, they can do those surveys with the mobile application called Survey123 that they have. Sometimes they are proactive inspections; sometimes they are reactive inspections.

Leading into the shutdown period and the storm season in December 2019, we did a proactive campaign targeting some of those greenfield sites to make sure that they had

the sediment and erosion controls in place leading up to the storm season. We did that with another compliance team to make the best utilisation of resources.

We do proactive and reactive inspections subject to the risks posed from previous inspections, whereby it looked as though things could be done better. Yes, we are out looking at those quite often. As I said before, land and construction, building activities, are the main, I suppose, industry in the ACT.

MS CASTLEY: There were 300 fewer inspections in the last year. Why is that?

Mrs Sargent: Part of it would have been due to COVID.

MS CASTLEY: Because building was not going on during COVID?

Mrs Sargent: Just because of the stricter requirements to do with COVID and less activity.

MS CASTLEY: So less building activity or less activity from your inspectors?

Mrs Sargent: There was less building activity as well with the initial tightening of COVID.

MS CASTLEY: So for those three months you would expect that 100 inspections would be done a month? Over the year there was a drop of 300 inspections.

Mrs Sargent: Sorry, which page are you referring to?

MS CASTLEY: Page 248.

Ms Cheyne: There were 1,752 inspections in the previous financial year and then 1,426. I think Ms Castley is asking whether the drop was on a month-by-month basis in the months where activity was the slowest in the construction industry?

Mrs Sargent: As I said, during COVID there was less activity because we were not moving around as much. That is one of the things in terms of why there would have been fewer inspections.

MS CASTLEY: Can you take it on notice how many inspections your inspectors do in a month with regard to the erosion and sediment control plans?

Mrs Sargent: Yes.

MS CASTLEY: More plans were endorsed—72, then 88 and 93.

Mrs Sargent: That is because of the number of plans that come through to us due to the new developments that are happening.

MR BRADDOCK: Who is responsible for tracking the movement of general waste across the border both into and outside the ACT?

Mrs Sargent: In terms of the remit for the Environment Protection Authority, we have the jurisdiction within the ACT. Jurisdiction across into New South Wales is the jurisdiction of New South Wales. Are you referring to fill?

MR BRADDOCK: General landfill. Do we know if it all stays in the ACT? Is it being exported out of the ACT to another jurisdiction? Are we accepting waste from New South Wales?

Mrs Sargent: In about 2013 when levies were introduced in New South Wales for a range of things, the ACT, working across the border, and New South Wales set up an illegal waste dumping committee to look at the illegal movement of waste. Waste is tracked by both jurisdictions under different pieces of legislation. However, once it leaves the ACT, it comes under the legislative requirements of that jurisdiction.

MR BRADDOCK: Do we know how much left the ACT last year?

Mrs Sargent: We would not know the total, I do not believe.

MR BRADDOCK: What would we know?

Mrs Sargent: Fill in terms of soil going across to New South Wales, is allowed.

MR BRADDOCK: I am not talking about fill in terms of soil but waste in terms of household waste and garbage.

Mrs Sargent: Do you mean illegally or legally?

MR BRADDOCK: I am trying to understand how much is moving.

Mrs Sargent: In terms of household waste, ACT processes some New South Wales residential waste. That is allowed to come in. The landfill has an environmental authorisation in terms of what can be accepted and there are monitoring requirements.

In terms of regulated waste, which is hazardous or high-risk waste, you need an environmental authorisation to transport and process it. The same applies in New South Wales for that stream of waste.

For controlled waste, there is a national environment protection movement of controlled waste measurement between state and territories, and that is a commonwealth agreement. So those movements are tracked across the whole of Australia.

MR BRADDOCK: Coming back to general waste, the ACT is receiving some New South Wales domestic waste to put into our landfill but no ACT waste is crossing the border the other way?

Mrs Sargent: No, not that I am aware of.

MS CASTLEY: Back on inspections, page 249 says that 599 contaminated sites were inspected compared to 860, due to COVID. Now that COVID is over, how many

inspections have been done? Are we back up to normal speed?

Mrs Sargent: Yes. Now that we are out of COVID we are doing inspections as we normally would.

MS CASTLEY: What was the impact due to COVID? I noted that 300 fewer inspections were done so I will assume that it is the same for contaminated sites. Have your inspectors had to work doubly hard to go back over the sites they missed during that time?

Mrs Sargent: They do not miss any sites. They will still be inspecting them but maybe less often. Again, as I said, we also have the community as our eyes and ears. So if the community notices something, we will inspect it. We are doing proactive inspections to ensure that the environment is being protected on all fronts. We also do reactive inspections.

MS CASTLEY: How many inspections at each site each year do you do?

Mrs Sargent: That is not a requirement; it depends on the risk of the site.

MS CASTLEY: On building sites and noise, there would be foul language and I imagine those complaints would be coming through.

Mrs Sargent: People noise is not the remit of the Environment Protection Authority.

MS CASTLEY: But what if it comes from a building site?

Mrs Sargent: That is not the remit of the Environment Protection Authority. Any people noise is not the remit of the Environment Protection Authority.

MS CASTLEY: Whose remit is that?

Mrs Sargent: Well, I suppose swearing is potentially the police.

MS CASTLEY: I would like to get a breakdown of the contaminated sites. Can we get a list of those sites across Canberra?

Mrs Sargent: There is a contaminated sites register where you can access that information.

MS CASTLEY: Where is that?

Mrs Sargent: It is on the Access Canberra website and it is a publicly available register.

Ms Cheyne: If you google “contaminated sites Access Canberra”, the second option is the register.

MS CASTLEY: Page 250 talks about the beneficial re-use approvals, which involves the reapplication of soil that has a level of contamination that does not pose a risk to

humans. In 2019-20, 153,268 cubic metres of soil was re-used, which was a massive drop from the year before. Why is that?

Mrs Sargent: Maybe they are building less underground car parks or something like that. We only assess what comes to us. It is a fact that that is the amount that was approved in terms of building underground car parks and that sort of thing. Basically, it is where soil is being dug up and then used somewhere else.

Ms Cheyne: You will see that the applications did not really go down; it was perhaps what people were asking for within their applications.

THE CHAIR: On behalf of the committee, I thank the minister and officials for your attendance today. If witnesses have taken any questions on notice, could you please provide the answers to the committee secretary within five working days.

Short suspension.

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, Climate Action, Policy and Cabinet

Environment, Planning and Sustainable Development Directorate
Rutledge, Mr Geoffrey, Deputy Director-General, Environment, Water and Emissions Reduction

THE CHAIR: In this session, we will hear from the Chief Minister, in his capacity as the Minister for Climate Action, and officials. I remind witnesses of the protections and obligations afforded by parliamentary privilege and draw your attention to the privilege statement. The provision of false and misleading evidence is a serious matter, and all participants today are reminded of this. Can I confirm for the record that you understand the privilege implications of the statement?

Mr Barr: Yes.

THE CHAIR: As we are not inviting opening statements, we will now proceed to questions.

Chief Minister, my first question today is this. There is a fair degree of interest in the community about the Sustainable Household Scheme. What time frame is the government working to, to have these loans available in the community?

Mr Barr: We will open expressions of interest—a reasonable amount of publicity will be associated with that—this month. The eligibility criteria and the various finer details of the scheme will be before cabinet in the not-too-distant future.

In the first instance, we are just looking at what level of interest there will be. A number of households have been through the Actsmart program who are pretty well ready to go in terms of making an investment decision on one of the products that is already clearly going to be within the scheme.

The intent is that over time, as we roll through the implementation, more products and more accredited suppliers will come into the scheme. I would hope that we will have our first engagement with householders in the next three months in terms of a registration of interest process. Then, over fiscal year 2021-22, we would start being in a position to execute the interest-free loan arrangements.

Before we do that, we have to go through a procurement process for the loan provider. Cabinet will need to make some determinations on the exact model, as to whether that would simply be a financial institution construct or whether we would be more actively managing loans. I think it is more likely, without pre-empting those considerations, that we are not going to establish the ACT government bank; we would not be seeking to manage 10,000 small loans. We are mostly likely to

outsource that element of the program.

We are looking at the procurement process and the outcomes from procurements of a couple of other states who have undertaken a similar process—New South Wales and South Australia—to get a bit of a sense of what the market response and market interest will be. Another potential model is through an energy retailer. We are a shareholder in one; we could go down that path. Or it could be a combination.

I will have more to say about that post the cabinet consideration and the commencement of the procurement process. As a first step, because we are getting a lot of interest from households wanting to at least register their interest, there will be a degree of marketing and promotion around the capacity to do that this month.

MR BRADDOCK: How are you going to make sure that those loans actually contribute to dropping emissions? For example, we are not going to pay for electricity efficiency schemes when we are already at 100 per cent renewable.

Mr Barr: This is an interesting factor in terms of what you would include within the suite of available technologies for households to take up. I guess there is an argument around how much is stored and dispatchable renewable energy—hence the interest in household battery programs and being able to support that—recognising also the potential uptake in EVs over time. That is why solar panels, batteries and electric heat pumps have been a particular focus, allowing for a gas to electric conversion or a more efficient electric product.

Whilst you are correct that 100 per cent renewable does take a bit of the pressure off in terms of emissions from products that utilise electricity, there is still value in more efficient appliances and less overall demand for energy.

A lot of the scheme's focus will be on conversion. When people's gas system reaches end of life or if they want to make a slightly earlier investment, given an expected trajectory on gas prices versus electricity prices, the scheme would support them in that regard. Also, electric vehicles will be part of the scheme, both new and second-hand. In the different phases, there will be different products, but ultimately all will contribute to a lower emissions profile.

The scheme has three purposes, and I was very clear about this during the election campaign. Yes, it is an emissions reduction scheme, but it is also a cost of living benefit for households: it has another purpose—to reduce household energy bills. Its third purpose is job creation in an emerging industry sector.

The reason we are going to have a measured introduction using only approved and accredited suppliers is that we are not looking to attract a lot of new entrants into the industry—no cowboys, no fly-by-nighters. It is very much about building a sustainable path for an industry that is growing substantially. This will facilitate further managed growth.

There is no rush. There will not be a stampede. Most of the loans will be two or three years down the track, not in the first three months, because the scheme will, as I say, gear up. It is not time limited; people do not have to be in by a certain date in order to

qualify for eligibility. It is not a stimulus scheme, in that it needs to be in in the next six months or that is it. It is running for the rest of this parliamentary term and, I hope, beyond.

MR BRADDOCK: You will be tracking how much emissions reduction is achieved by any of the loans?

Mr Barr: Yes.

MR BRADDOCK: Will you be prioritising loans to areas which maximise emissions reductions first?

Mr Barr: We have not got to that level of decision-making in terms of loan prioritisation. We will have eligibility criteria—emissions reduction will be a factor—but there will also be some means testing associated with this. Our government research has indicated that there is a significant cohort of middle Canberra who, with the right incentives, have a very strong intent to reduce their household emissions. The single barrier to that was the up-front cost of investing in the technology. The property thresholds, and those sorts of questions, will be outlined when the scheme is released in more detail. It is not the government's intent to help multimillion-dollar households make the switch; it is very much a middle Canberra program. For social and public housing, we have a separate stream.

This is very much about people who have indicated, through response to government surveys, that they understand the need to make the change, and they want to make the change, but they just cannot afford the up-front cost. That is what this scheme helps address.

THE CHAIR: I have a supplementary in relation to eligibility. When the expression of interest goes out, the government will define the eligibility criteria?

Mr Barr: The broad eligibility criteria will be published very soon, in terms of property thresholds, for example. As I say, it will be clear that if you are living in a multimillion-dollar house with a house and land value et cetera, this is not the scheme for you. It is very much, as I say, middle Canberra.

The range of products you may be able to utilise the interest-free loans for will grow over time as we have a greater level of comfort about the quality of the products; their efficacy in terms of emission reduction and cost reduction for households; and our confidence that we have appropriately accredited suppliers who will install these in a sensible, measured and safe way.

As I have said from the start, it is not a race; it is not a time-limited thing. Safety and quality are going to be first and foremost in this. I appreciate that there may be some frustration from some households who are keen to get things done tomorrow, but we are not going to compromise on quality and safety as we roll out the scheme.

MS CASTLEY: I want to go to the replacement of solar panels. The ACT was an early adopter of rooftop solar. I imagine some are coming to the end of their life.

Mr Barr: Close, yes.

MS CASTLEY: What has the government put in place for the recycling of rooftop solar panels?

Mr Barr: That is not strictly a question in this area, but we will take it on notice and get some information for you.

MS CASTLEY: I would also like to know what advice people are given when they launch into the solar panel scheme.

Mr Barr: Sure, yes.

MS CASTLEY: Is there consideration of asking companies who supply them to think about a stewardship program?

Mr Barr: That is commonplace now for manufactured goods that have a particular life span. Solar panels generally have a multidecade life span, not a short life span. Even the ones that went in as part of the initial feed-in tariff program towards the end of the last decade would still be only 10 to 12 years old. Absent hail damage or something like that, they would still be going strong.

This will be an issue over time, so I am happy to get the information on the recycling process, but it is more a waste management issue rather than something for this area.

MR BRADDOCK: I have a question about the big battery. One of the great benefits of the big batteries is that they can support all-electric suburbs, help stabilise the grid and so forth. Will this battery include neighbourhood-level batteries? Will it be able to support all-electric suburbs in the future?

Mr Barr: Yes. It is intended to be a distributed network—not one massive site, but a whole series of linked batteries. Some will be of quite significant scale in the current national context.

At the moment, the largest one is in South Australia, associated with the Hornsdale project, which is one of the ACT's contracted windfarms for our 100 per cent renewable energy target. My former South Australian colleague Jay Weatherill put out the challenge, which Elon Musk rose to, to build it in 100 days. That battery has been expanded. Something of that size is feasible at a couple of locations in the ACT associated with the two main interconnectors that connect the ACT into the New South Wales grid and then into the National Energy Market.

There would also be a wide range of small-scale batteries at business, school or community level, distributed, with a view that a component of the power that is stored would be available to resell into the National Energy Market when prices were high. That is not the entirety of what we are intending here, but it will be a revenue opportunity for the territory. It is similar to the way in which the South Australian battery is operating. It stores power when it is generated in great quantum at a very low price by renewable sources, and then dispatches back into the NEM when prices are high. Prices have been as high as \$14,000 a kilowatt hour.

Part of the other benefit is to reduce the risk. You identified network stabilisation. It is also to reduce the risk of brownouts for our city during peak demand times—those hottest of summer days when some of the ageing coal-fired power stations will not be able to produce energy because of the heat and the conditions where their generation occurs. This tends to be when solar is peaking as a contributor to total energy produced on the eastern seaboard. So we will have that, plus what is stored in the batteries, able to discharge into our network. That will give us an insurance policy, effectively, into the future against the sort of brownouts that other cities have experienced over really hot summer events. The expectation with climate change is that we are going to have more of those sorts of heatwaves, so we need to build this capacity within our energy network to be resilient to just those occurrences.

MR BRADDOCK: Absolutely. We have an issue with Mitchell—I have spoken to Mitchell traders—where they have plenty of roof space and would love to put more solar there but there are grid capacity issues in terms of being able to store it. They would be very keen to have some form of battery available there to assist them in being able to do that.

Mr Barr: As a general observation, our electricity network capacity is going to have to be significantly augmented progressively as we make that transition away from gas.

The load falls at different times. Our gas load peaks during winter, principally for space heating. Our pressure in terms of the electricity network comes principally on the hottest summer days with a lot of air conditioners running simultaneously and the demand across a broader region. It would appear that heatwaves in our part of the country, when they occur, extend to New South Wales, Victoria and often South Australia—all at the same time. That puts a lot of strain on our current energy network.

THE CHAIR: Are you able to talk more about the revenue-generating opportunities from the battery for the territory?

Mr Barr: Yes. I touched on that in the previous response, but the government's policy intent is effectively to arbitrage; to generate power when it is cheap and sell it back into the market.

There will be a range of technical determinations within the totality of the battery storage capacity. With this distributed network, how much will be reserved for sale back into the NEM at certain times? We will take technical advice from the Energy Market Operator both in the establishment of the battery and the distributed network and in our trading approach.

Our endeavour is just to be able to raise some money for the territory, and the community, through the sale of power at peak times. It is also to help the Energy Market Operator to have greater network stability. We are joined in this endeavour by the other states who are part of the National Energy Market. We are all pushing against what has been, effectively, a decade and a half of inaction at a commonwealth level. The states and territories are the doers in Australia; we are the ones that actually get things done. I have been really pleased with the approach of the New South Wales

minister, Matt Kean. He is taking a very similar approach to that of the ACT and is very proudly shifting that state's power generation, investment in battery storage and the like. We will, I think, be able to cooperate and collaborate with New South Wales effectively.

THE CHAIR: I have a question on the distributive network model; it is just my lack of technical understanding. Will it go all over Canberra or will there just be parts of Canberra?

Mr Barr: It can go all over Canberra. It will be part of the network. There will be various points where the current infrastructure will need augmentation to manage the dispatch of a large amount of power. Effectively, the grid was historically designed to come from certain locations and then go into people's houses. Over time, as more houses have become energy generators of their own, with rooftop solar and the like, you have a power flow going back the other way. The network engineers will advise on the best significant locations. By significant, I mean really large battery locations.

We have had a couple of projects that have been part of our existing reverse auction process, where we have wanted bidders or suppliers of renewable energy to also have battery elements in their bids. A couple of projects were procured last year. The companies that are doing this have mapped out viable locations for quite large scale battery storage. As I mentioned before, they tend to be located near the highest voltage lines, the interconnectors into the ACT and New South Wales. We have a couple of those. They are sites that have already been identified and purchased by those suppliers. They are getting on with the delivery, the start of making all our little batteries a lot bigger; and there is more to come here.

MS CASTLEY: The people in Yerrabi, for instance, will benefit from the battery? It will go out to all and sundry?

Mr Barr: Yes. As long as you are connected to the electricity network, you have capacity to benefit.

MS CASTLEY: Last September, you were quoted as saying that the Canberra big battery will deliver 200 megawatts of battery storage, ensuring lower electricity prices.

Mr Barr: Yes.

MS CASTLEY: Are you able to put a figure on that?

Mr Barr: In terms of how much the electricity price will go down, that will depend on the cost of generation at the time. Once renewables are invested in, when the sun shines and the wind blows, it is effectively the cheapest form of new energy.

MS CASTLEY: And if the sun does not shine and the wind does not blow?

Mr Barr: Because we have a distributed network of power plants, if you like—we have our wind sources in Victoria, New South Wales, South Australia and the Canberra region—it is very rare that the wind is not blowing in one area. The location of those power plants was mapped by a Canberra company called Windlab, which

looked for the windiest spots in Australia to locate the wind turbines. There is a lot of science for their location.

On the solar side, we have more hours of sunshine than any other Australian city. What is produced within our region is quite significant. But large-scale solar is not just inside the borders of the ACT; we are also able to source that renewable energy from other parts of the National Energy Market.

MS CASTLEY: So there is a chance that it could get more expensive at times?

Mr Barr: Not really. We have fixed price contracts. We effectively hedged 20 years into the future at a very low fixed price, so the nature of our supply contracts gives us very good certainty in relation to what we will be paying for renewable energy.

The variable factor is the fossil fuel produced energy. That can be very expensive. The other factor is that it is a market, so there is the interaction of supply and demand. That comes to the observation I was making earlier. The value in having the battery is that we will store the power when it is cheapest to produce and then we will have it to dispatch locally if necessary. When the price reaches \$14,000 a kilowatt hour, we do not have to buy it from a coal-fired power station in New South Wales; we will have it in our battery.

MS CASTLEY: In 2019-20, the next generation storage program, I understand, reached six megawatts in cumulative installed capacity. How do you get to 250, and at what cost?

Mr Barr: As I mentioned earlier, the next two renewable sources have much larger batteries. Those procurements, which were completed last year, to supply the extra power also came with a requirement for more battery storage. Geoffrey, are you in a position to talk us through the numbers?

Mr Rutledge: Yes, sure. I acknowledge the privilege statement.

As the Chief Minister was saying, there will not be one big battery that gets us to 250; it will be a series of batteries. As the Chief Minister said, we have already committed to a 10-megawatt big battery and a 50. That is yet to be built, but that is through the previous reverse auctions. Next generation, which is a continuing program, helps households take up batteries themselves. They are joined by what we call a virtual power plant, which is just batteries on homes around Canberra. They can work in the network to support both the household and the grid. Currently that is at six, but it is continuing.

With the household loan scheme that the Chief Minister talked about, I think we will see a big uptake, particularly in batteries. As the Chief Minister said, a lot of people find the up-front cost prohibitive at this stage, but an interest-free loan may help and there will be new products coming to market.

An emerging technology which I am personally very excited about is vehicle-to-grid technology. This is where your electric vehicle works as a battery itself. A car battery is roughly four times the size of a residential battery. The idea would be that you

would drive your Nissan Leaf—I use that proprietary term because the Nissan Leaf is the one that is on the market and available—and then you would plug it into the network when you got home. Depending on where the power needs were—if electricity was cheap, it would recharge your car; if electricity was expensive, it would charge your house. You would run your house off your car, or the network would take from your car, for the purpose of voltage control or to supplement ancillary services to help the network out at those peak times. Then overnight, when electricity is cheap, it would recharge your car.

Effectively, they would be batteries on wheels. I am predicting that in a few years the role of the residential battery will be a lot less and the role of the neighbourhood battery and the car battery—with vehicle to grid or vehicle to grid on a commercial scale, on a bus scale or at the passenger vehicle scale—will become a very popular addition to the network. Cumulatively, over the next four to five years, once you add up all of those, I predict that we will hit 250. It will partly be how much we are able to procure when we direct procure; partly it will be what is the consumer intake. Going to Mr Braddock's point, Mitchell traders, for example, could make a collective and jointly purchase a battery themselves. Two or three people have come to us already looking to make private investment in larger-scale batteries because they see money in it.

I think the 250 megawatts will be delivered over time. As the Chief Minister said, it is not going to be a big one; it is going to be a few big ones, a few privately led ones, a lot on the side of houses, and finally, I think, in cars.

MS CASTLEY: What period do you think it will be to get to 250?

Mr Rutledge: Four to five years.

Mr Barr: Looking at what is proposed in New South Wales, there are battery facilities ranging from 30 megawatts up to 700, three times our target. The proponents are largely energy companies—Origin Energy, AGL—who we are in the joint venture with. There are projects. There is the old Liddell coal-fired station in the Hunter. AGL are proposing a 150-megawatt facility there. It is quite possible that a couple of our ones will be in the 50 to 100 megawatts range. Two of those and you are basically there, not to mention what might happen at the household level.

I think 250 is the minimum and that we will go well beyond it. The time frame to develop these, as Geoffrey has said, depending on available land, is in the three- to five-year range. The ones that we procured last year—

MS CASTLEY: Only 60—10 and 50.

Mr Barr: Yes, though the proponents committed to a minimum of that amount but are already talking about it being more.

MS CASTLEY: You are quoted as saying that a Canberra battery will deliver 250.

Mr Barr: Yes, that is right. That is all the batteries combined. It is not one big battery; it is a whole series of them. The cumulative number will be well over

250 megawatts.

MR BRADDOCK: I suppose my question is to you not just as Minister for Climate Action but also as Chief Minister. If you look at our climate change strategy, you see an objective there of a zero emissions government. So my question is: what are you doing to make sure that the ACT government is moving towards zero emissions?

Mr Barr: As I said, a lot of progress has already been made. Clearly, the renewable energy target getting to 100 per cent has made a big impact on ACT government emissions. Where we are looking now is within the transport sector. In our own fleet we have made quite a switch in terms of the small-vehicle fleet for the ACT, but light rail is another example of a step into a zero emissions public transport future. Clearly there is a program underway in terms of the replacement of the diesel and compressed natural gas bus fleet, and that will roll out over time.

We are also looking at zero emission vehicles in some of the specialty areas like fire trucks and ambulances and those sorts of things, which are effectively bespoke vehicles. I think on the transport side, pretty well everything is manufactured overseas now. So you are going to see a pretty dramatic shift in terms of the nature of engines that drive transportation. That will occur at a global level, and quicker than a lot of people think.

We then come to gas, which clearly is a legacy item. We are, as a 50 per cent partner in an energy retail business, through ActewAGL, somewhat entangled in the business of selling natural gas as part of an energy product mix. In the short term, the best way to get emission reduction from our existing gas network is to inject biogas into the network. That will not require households to change their appliances but would contribute to emission reduction. The question of how much biogas is available, and what it would do to the price of gas et cetera, are things that need to be worked through over the next few years as we begin the transition away from the current gas supply arrangements.

Hydrogen does offer a medium-term solution in terms of the, I think, around \$3 billion asset that is the gas network that sits underneath this city. So it is not something that we can just turn off or divest from or privatise or do anything like that. We need to play a role in the transition, not just wash our hands of it. Fiscally, we cannot afford to wash our hands of it, so we do need to play an active role there. I am advised, at this point, that the expectation on hydrogen as a viable alternative is somewhere in the 2030s, so it is 10 years hence. Unless there is some further technological advance, it would require a change in household appliances in order to be able to utilise hydrogen gas through our existing network infrastructure.

MR BRADDOCK: Yes.

Mr Barr: I see that as more of a medium-term challenge. In the meantime, there is, I guess, the threshold issue of not adding further to the problem. So what you are starting to see is a very significant reduction in gas usage across new ACT government assets or the complete elimination of gas principally used for space heating, and we will get out of that over time.

Then, as we delve into each portfolio area, there are programs underway to improve the energy efficiency of ACT government-owned assets, to reduce their total energy use—which contributes, obviously, to emission reduction—and then to transition older buildings and older plants and equipment when they reach end of life, to replace them not with a like product but with a zero emissions product.

MR BRADDOCK: Can I just ask a further question, in terms of the ACT government passenger fleet. How many zero emissions vehicles does the government now have, and what proportion of the fleet is that?

Mr Barr: I will need to take that on notice in terms of this very day. Certainly, as part of the government's policy, which has been in place for a number of years now, emitting vehicles at their end of life are not being replaced by other emitting vehicles unless there is no viable zero emissions alternative. In some instances that has been necessary for highly specialised vehicles—emergency services vehicles and the like—but your general government pool fleet is increasingly zero emissions. We do have a couple of really interesting partnerships with vehicle manufacturers, Hyundai being one. I think we have 20 of their Nexo SUV hydrogen powered vehicles, as part of an Australian first, with a refuelling station in Fyshwick, in partnership with ActewAGL.

Mr Rutledge: Correct.

Mr Barr: All of that is right. There we go; my memory serves me well.

MR BRADDOCK: I applaud that, and I would be very interested to see the figures as to how many we have and the proportion they make. The next question is—

Mr Rutledge: Mr Braddock, we currently have 117 zero emissions vehicles within our fleet. That is about a third of our fleet. That makes the ACT government the largest EV fleet owner in the country. That means that we have been able to learn by doing, because we are very much at the cutting edge. I think we can talk about this more when the Minister for Emissions Reduction is here later, because he has initiatives in this budget to talk about the Z strategy.

MR BRADDOCK: I will also be raising those questions, but I have a last question for you as the Chief Minister. We have a fantastically large zero emissions vehicle fleet. Wouldn't it be great if that was made available in some form of car-sharing arrangement so that when the public servants do not need them, they can be utilised by the population of Canberra?

Mr Barr: Okay. I think our biggest achievement was to get a car-pooling arrangement between ACT agencies. Each agency wanted its own. I think most of the vehicles are utilised most of the time because we have been very efficient in the number of vehicles we have. So this process has also meant reducing the number of vehicles.

MR BRADDOCK: Outside of business hours, as well?

Mr Barr: That is when they need to be charged to be used in business hours. They are not really available for night-time usage because that is when vehicles are being

charged for the next day.

MR BRADDOCK: And on the weekends?

Mr Barr: There is a whole range of insurance and other issues that would come into play, as well as potentially reducing the effective life of the vehicle. Whilst I am in favour of car-share programs, I do not think that the government fleet is the best way to proceed. I think that it is much better done by the private sector rather than trying to make a few government cars available for a few people on the weekends, given the inherent risk associated with that. Some vehicles are quite generic and are not just passenger ones; others are a little more specialised. I completely rule out allowing the general public to be driving electric fire trucks around on the weekend, or emergency service vehicles, or anything like that.

MR BRADDOCK: Electric fire trucks I will let you have, but that is a disagreement we can have another day. Thank you.

Mr Barr: Indeed.

MS CASTLEY: Are all the ministers driving electric vehicles?

Mr Barr: No. That would be a decision for individuals. You do not have to have a car at all, obviously. There is no requirement for individuals to have a car. Some ministers do and some do not.

MS CASTLEY: Do you drive one?

Mr Barr: If you are interested, the lease on my car is coming up in the next few months. I am test driving a plug-in hybrid vehicle on Saturday.

MS CASTLEY: Fabulous.

Mr Barr: My intention is that the next car I have will effectively be all electric for the driving I do within Canberra. Occasionally I go on longer trips, and the plug-in hybrids give you the benefit of all-electric for city-type journeys but if you need to go 600 or 700 kilometres, you have a petrol engine to support that. There are other members, I understand, who have fully electric cars and some who currently have hybrid cars.

MS CASTLEY: I will be test driving one myself. It sounds like a great plan. I have some questions about the lithium. My understanding is that lithium is one of the most dangerous metals in the environment and that extracting it harms the soil and air et cetera. So what is the environmental impact of lithium that is used in electric cars?

Mr Barr: Okay. I will take full detail of that on notice, but it is a question that does get asked. As I understand the science, yes, there certainly is more energy and more emissions from battery electric vehicles—BEVs—than an internal combustion engine vehicle in terms of production, but within a very short time frame of the usage of the car an EV comes out ahead in terms of its total life emissions. There are numerous studies that have demonstrated this. This is a question that some people like to pose

on social media when I post about electric vehicles. It is a legitimate question.

MS CASTLEY: Yes.

Mr Barr: The answer is that over a reasonable lifetime of the vehicle—being 15 to 20 years—a zero emissions vehicle comes out way ahead. It starts being ahead of an internal combustion engine, particularly if your electricity is renewably sourced, often within the first 24 months of its use. So they are certainly better for the environment. They do not come at zero environmental costs—of course not—and I do not think that anyone is making that claim, but there are also equally environmentally damaging elements of internal combustion engines, both in production and then operation—as in drilling for oil and the emissions that come from petrol.

MS CASTLEY: Yes. I would really appreciate if you could share with me where I could read about that, because—

Mr Barr: Sure, yes.

MS CASTLEY: That is a question I have been asking since I was given this portfolio.

Mr Barr: If I get a moment, I will send you a couple of links.

MS CASTLEY: Yes, please.

Mr Barr: You can just google it. There are many reports on this question.

MS CASTLEY: Good. I have so many questions about this. I need that list, I guess, to understand it a little bit better. I know that a Tesla has 12 kilograms of lithium, but the grid storage solutions said that it would need much more. So has it been factored in, when measuring the environmental harm, in assessing our reliance on batteries?

Mr Barr: Sure. Obviously, we are not manufacturing any vehicles in the ACT or in Australia anymore. The Liberal Party saw—

MS CASTLEY: But we are encouraging people to purchase them, and rightfully so if it does—

Mr Barr: Indeed, yes. People are going to purchase vehicles for private transportation. If you are seeking to mount an argument here that internal combustion engine vehicles are better for the environment—

MS CASTLEY: No, I am just trying to understand what we have considered—

Mr Barr: Yes, okay—

MS CASTLEY: —as we are going towards the electric vehicles, because I am not opposed.

Mr Barr: We, and everywhere else in the world—with the exception of a couple of countries that are led by right-wing ideologues who are climate change deniers—have

undertaken this shift. Every major vehicle manufacturer in the world is undertaking this shift.

MS CASTLEY: Great.

Mr Barr: It has been assessed thousands of times, and this question has been asked hundreds of millions of times around the world, and the science is very clear. I am, as I said, happy to provide you with a list of scientific papers and analysis of this question, but it is not like the ACT is suddenly deciding to swim against the tide of the rest of the world. Frankly, the choices for consumers are going to be determined by the motor vehicles manufacturers, and a number of them have already announced that by 2025 or 2030 they will no longer make internal combustion engine vehicles. You will just not be able to buy them anymore. The EU; Great Britain under Boris Johnson; and the United States, soon, under Joe Biden, will see the phasing out of these vehicles.

MS CASTLEY: I understand.

Mr Barr: We are moving to an electric future.

MS CASTLEY: Yes; I get it, and I am not opposing.

Mr Barr: Yes.

MS CASTLEY: My concern is for people in Yerrabi. They are expensive. They are so expensive at this point in time.

Mr Barr: At the moment, yes, but as the volume of production increases, the price will fall.

MS CASTLEY: The price will come down. That is what I keep hearing.

Mr Barr: As with all new technology. It is already happening. MG have a full EV on the market now that has a four in front of its price tag, which is, I think, the cheapest EV on the market now by a good \$10,000 to \$15,000.

MS CASTLEY: Yes, even the Hyundais are more expensive than that.

Mr Barr: Yes.

THE CHAIR: I have a substantive question about the Coordinator General for Climate Action position that has been established. Can I hear about this position? Would you like to talk about the main responsibilities, and then I might ask further questions.

Mr Engele: I am in CMTEDD directorate. We have a small office, with a few staff in it and me. I think the creation of that was a recognition of the whole-of-government impact of climate change and the adaptation challenge. Also, some of the projects that are being put together really require directorates to work closely together. There are a broad range. A lot of them are in the Climate Change Strategy or in the Parliamentary

and Governing Agreement. We are focused mainly on trying to get clear what types of activities are required by each directorate to contribute to those. We have put a number of working groups together, where we are working through each of those commitments and making sure that we are not undertaking one project in a way which precludes the benefits of others. So we are really pulling together across government, and then also supporting cabinet in understanding how best to roll out these programs.

The other thing is that we have stewardship over the Big Canberra Battery and also the Sustainable Household Scheme. We are doing that jointly with EPSDD—hence the other officials here today, given that they have the policy expertise. So we have a project management role in some of those larger projects, and a coordination role of trying to pull things together. That is a common role to what Policy and Cabinet—an essential part of CMTEEDD—has done on a number of other projects as well. So it is a common thing that we do.

The other thing worth mentioning is that we are working with EPSDD from a communications perspective so that we can provide the community with a single joined-up message on what they can do to take action to reduce emissions, and also to give them some clarity on how to access all the different schemes—because there are a large number of projects for them all to be integrated—and make it simple for the community to navigate.

THE CHAIR: With your communication strategy, is that starting now?

Mr Engele: Yes.

THE CHAIR: With this expression of interest?

Mr Engele: That is right, yes. We are pulling that together now, and also just looking at what is existing. There are a number of other communication streams that have really good messaging on things that people can do and on access to the programs. We are just pulling them together into a single community-facing platform.

MS CASTLEY: On page 32 of the budget, line G in table 1, it says that there is a new accountability indicator with some initiatives. There is three months left of the reporting period. I am just wondering how you are going with the three initiatives—how far have you progressed?

Mr Engele: Sorry, could you just repeat the page reference?

MS CASTLEY: Yes. Accountability indicator G.

Mr Engele: Sorry, what page are you on?

MS CASTLEY: I am on page 32, budget papers B. At A it notes that the accountability indicator incorporates three key government policy and project initiatives to be delivered during the year.

Mr Engele: Yes. So those three are the ones listed below. That is essentially the establishment of the office.

MS CASTLEY: Yes.

Mr Engele: That has been established. We are just finalising recruitment on some of the positions at the moment. The other one is the commencement of the Sustainable Household Scheme. That is the zero interest loan scheme that we were talking about before. We are rapidly pulling that together at the moment, with the intention of the commencement of the expressions of interest this financial year. Then there is the market sounding on the large-scale battery storage system. That is the Big Canberra Battery. We have been undertaking informal market sounding, and then there will be a more formal process. So those are the three initiatives that are on track for delivery.

MS CASTLEY: On track for delivery. Great. I just have questions about the appointment of your role. Was it advertised or was it an internal promotion?

Mr Engele: I am currently acting in the position. There is a recruitment process that will be ongoing. It was an internal EOI to get things started, and then there will be a full recruitment process undertaken.

MS CASTLEY: How many staff have you got in the office? I made a note; did you say that it is a small office?

Mr Engele: Yes. At the moment we have one band 1, who has been transferred across from Policy and Cabinet, and one graduate. We are recruiting two SOG level staff at the moment.

MS CASTLEY: Is that expected to grow or are you going to stick to a four-person team?

Mr Engele: Yes. It is just a small team. The key work is working with the team at EPSDD who have got the project teams delivering some of those projects. So we are working jointly with them.

MS CASTLEY: The coordinator general is also head of the Better Regulation Task Force, so how do they work together?

Mr Engele: Sure. Another part of Policy and Cabinet is the Better Regulation Task Force, so, yes, that is a dual role that I hold, and there is another separate team that sits in Policy and Cabinet. That is the task force that is reporting up to me.

MS CASTLEY: Okay. Will your office supervise all of the initiatives, the programs and the funds related to achieving the zero emissions targets?

Mr Engele: The projects that we are focusing on are just those two that are outlined in the administrative arrangements but, for all the other ones, we are working jointly with the relevant directorates. So that could be TCCS in relation to the electric buses, it can be EPSDD in relation to the zero emissions vehicles.

MS CASTLEY: Okay.

Mr Barr: The coordinator general also provides support to the cabinet climate action subcommittee, which I chair.

MR BRADDOCK: We have been talking a lot about emissions reduction but not much about climate resilience. I am just thinking, given the world is on track for potentially a three-degree warming, what are you doing in your role, again as Chief Minister, about managing that risk?

Mr Barr: Indeed, yes. This is another feature of the work both of the cabinet subcommittee and of Sam's group, noting that there would be a wide variety of different asset owners within ACT government. Part of that work is somewhat future focused in terms of the current infrastructure program and the future infrastructure program in regard to resilience against more extreme weather events. It also has a lens looking at our existing infrastructure that will be coming to end of life and which will need to be replaced, and that that would be augmented. That augmentation process needs to take account of changing climate. A good practical example of that is around stormwater management and treatment. We know we are going to get more severe storms and we are going to have more frequent, large flooding events, so there will be assessments around flood-prone areas and what sorts of further infrastructure investment might mitigate against quite significant flooding. This city has, in its history, seen loss of life from flooding events and significant property damage.

Clearly, we have experienced very expensive hailstorms in terms of property damage. Extreme cold and extreme heat at different times of the year impact on the operation of a variety of different government services, including public transport. The bushfires the summer before last gave a bit of an insight into the challenges of running a whole range of government services in a smoke-filled environment. Those are the sorts of issues that are being looked at, principally through a lens of infrastructure, initially, because we think that is where the most immediate challenges are, but it will need to extend beyond that.

What I am very focused on is that the government's current and future infrastructure program takes account of a change in climate and the need to adapt what we build, and potentially even where we build it, to reflect that change in climate. A lot of work has occurred in relation to emergency management, bushfire prone areas and those sorts of things. That work is very well advanced and has its origins going back to the 2003 bushfires, frankly. So there has been more than a decade of work relating to bushfire management. I feel that that is a good example of what can be done and the smart decisions that can be taken at a planning level and at a regulatory level, in terms of building standards, to be able to reflect a change in climate.

But in terms of where it goes next, I am particularly focused on those severe storm events. So flooding that could potentially risk life or cause significant property damage is a feature. That will require coordination across Transport Canberra and City Services, as well as Icon Water, which is a significant asset owner. As well, there is an integration into Ben's area in terms of future planning and, when infill occurs, how that might impact on stormwater flows and the like. Then, in the transport space, with respect to the procurement of light rail and the like, we had to be comfortable that the vehicles could operate across a potentially 50 to 55-degree temperature span, from minus 10 to plus 45 degrees Celsius. So you have to make smart infrastructure

and procurement decisions to reflect the reality of more climate extremes, and that is a factor in the thinking here as well.

MR BRADDOCK: Is there a single project or a dollar figure that could be attributed to strengthening our climate resilience in the ACT?

Mr Barr: I would be hesitant to say just one project, because it requires a whole-of-government change in terms of approach to infrastructure procurement, and it requires strategic asset management planning, most of which is done quite well here. But the other lens that needs to be added on now is climate resilience, particularly capacity for the infrastructure to operate within a much wider range of climate extremes than might have been the case 30 or 40 years ago.

It is an evolving piece of work. It is one of the reasons I established this portfolio and wanted a whole-of-government-led piece of work, and I took that on board as a responsibility of mine, as first minister. Obviously I have a couple of other very important projects that we have been talking about today, too, where we needed the capacity within government to coordinate the activity and deliver it quickly. Both of the projects—the main KPIs are in Sam’s area—require close collaboration with Treasury and Finance and within the energy policy area, as well as the environment and sustainability outcomes that we are seeking. So it requires at least three different areas of government. We have touched upon TCCS assets and Icon Water assets. It definitely needs whole-of-government leadership. That is why the portfolio was established. That is why the team has been established. We recognise the issue and we are getting on with the work that is necessary to respond.

MR BRADDOCK: Thank you. It will be great to have the visibility of that whole-of-government approach to what we are doing with climate resilience. I have been told to wind up, I believe.

THE CHAIR: Yes.

Mr Barr: I should finally add that we have the Climate Action Subcommittee, which involves the relevant portfolio ministers who have a stake in this. Other ministers will be invited when their portfolio is directly impacted. That subcommittee is effectively meeting every month now to coordinate whole-of-government responses and will feed into the Expenditure Review Committee process. And this, ultimately, is one of the wellbeing indicators for the territory. So our collective efforts here will endeavour to both futureproof our infrastructure but also maintain or improve the livability of the city.

THE CHAIR: Thank you, Chief Minister. I think we might wrap it up there. Thank you very much, officials. We will adjourn for a 15-minute break now.

Short suspension.

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

Rutledge, Mr Geoffrey, Deputy Director-General, Environment, Water and Emissions Reduction

Walker, Mr Ian, Executive Group Manager, Environment, Heritage and Water

McGlynn, Mr Gene, Executive Group Manager, Climate Change and Energy

THE CHAIR: Welcome back to this public hearing of the Standing Committee on Environment, Climate Change and Biodiversity into annual and financial reports for 2019-20 and estimates for 2020-21. In this session we will hear from the Minister for Water, Energy and Emissions Reduction and Minister for Gaming, and officials.

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

Mr Rattenbury: Yes, thank you.

THE CHAIR: As we are not inviting opening statements, we will now proceed to questions. My first question is in relation to the household low-income program. It is pleasing to see a rise in the number of households assisted by the household low-income program in 2019, compared with 2020. I understand this is partially because program workshops were held electronically, due to COVID and physical distancing. Can you advise of a rough estimate on the number of lower income households across the ACT who are struggling with the household costs of climate change sustainability measures, despite the initiatives?

Mr Rattenbury: No, we do not have a measure on that basis. The government does provide an annual cost-of-living impact statement as part of the minister's annual report on climate change. That indicates the costs that are borne through a range of schemes such as the Energy Efficiency Improvement Scheme, the large-scale feed-in tariff and the small-scale feed-in tariff, and a few other measures.

In terms of a measure of the number of households who are struggling as a result of climate measures, I do not think there is a measure of that. There are measures such as the number of households who are below the poverty line and various things like that, and they are the households who would be vulnerable to these sorts of charges, as they are to a range of other cost impacts.

MR BRADDOCK: My question is about the public charging stations for zero emissions vehicles. What will be the process in terms of determining where they are going to be located, consultation, and an invitation for submissions for that?

Mr Rattenbury: As the parliamentary agreement indicates, there will be a reverse auction process, which we intend to undertake as quickly as possible. There is a lot of

enthusiasm in the community for more charging points, as you can imagine. The intent is to do some research work over the next few months, and EPSDD has already started that work.

We need to think about the different considerations of where charging stations should be located. This goes to public demand, where we think people will use them the most and how many might go on one site. For example, is it better to have three or four on one site? If you just have one on a site and you pull up and it is busy, it is not very handy. It is about perhaps having two or three in one location, rather than having 50 in different locations across the city.

There are challenges in Yerrabi electorate, for example. I had a conversation with the Mitchell Traders. They said, “We’d like to have some.” We started having a discussion about this: if it goes to one cafe, which would be a great place to put it, because people would pull up, have their coffee and charge their car, how do we decide which cafe that will be? Clearly, it provides a competitive advantage in an area like Mitchell, where they are a bit spread out. If you go to, say, a small local shopping centre, you can put it in one place and all of the shops benefit from it. There are some tricky issues like that to be thought through. It is a combination of both technical issues and user issues. The technical issues are that it needs to be near a good power source and those kinds of things. There are some user issues, and what I would loosely call competitive issues.

MR BRADDOCK: Do you have an idea in terms of the time frame of when we are likely to be conducting those reverse auctions?

Mr Rattenbury: I will check the details of that for you, Mr Braddock.

Mr McGlynn: I have read and I acknowledge the privilege statement. The timing for that, roughly, is that there are three stages. One is a market sounding. We want to go out to the market and figure out what technologies are available, how they might work, who might be able to deliver those and those sorts of issue. That follows up some of the issues that the minister has raised. At the same time we will continue to do research on consumer sentiment—trying to figure out where the need is and what sort of charging people are interested in.

The next step is to develop a charging master plan, which is to figure out, given all of that information, what is the best way that we might roll out charging over time. That would include both public and private, and an acknowledgement of where the private charging might be, as well as the public. The intention is then to go to a tender process in the next financial year, and to roll out those 50 new charging stations over that period of time. I expect it would take the better part of the year to make that happen. That is roughly the time that we have in mind.

MS CASTLEY: How long have you got for the market sounding? How long will this three-phase approach take?

Mr McGlynn: I do not think we have nailed down the exact timing, but we would think that the market sounding would take a few weeks to a month, to get through that process and evaluate what comes out of that.

MS CASTLEY: Did you say you are bringing consultants in for that?

Mr McGlynn: I do not think we are bringing consultants in for that. That is something that we can do and talk to the industry about.

MS CASTLEY: You know the cost within your department. Can you tell me what that would be—to go through these three phases, the master plan, the market sounding—

Mr McGlynn: I do not have the cost in front of me. I can find that on notice, if we need to.

MS CASTLEY: Yes, thank you.

Mr McGlynn: We have the necessary funding in the budget for staffing to take us through that process.

MS CASTLEY: Minister, I have a question for you with regard to the charging stations, looking at where we might have one in a spot and three cars turn up. Would you say at the moment that might be a deterrent for people to start purchasing vehicles? Are you concerned about the speed with which—

Mr Rattenbury: Certainly, range anxiety is a concern for people. The main concerns about buying an electric vehicle are price of the vehicles and range anxiety. They are probably the two big barriers at the moment.

MS CASTLEY: Range anxiety?

Mr Rattenbury: That is what it is referred to. Actually, though, a lot of people in the community perhaps overestimate the range anxiety question, in the sense that the main vehicles that are on the market in Australia now have a range of between 200 and 400 kilometres. The average Canberran is not going to drive that much in a day, during their domestic life in the city—drive to work, drop the kids off on the way, pick the kids up on the way home, stop at the shops and do something else. You would be hard-pressed to do more than 60 to 80 kilometres in a day. Most people could get up in the morning, unplug the car from the wall at home, drive around all day, come back and plug the car in at night. When you come out the next morning it is 100 per cent ready to go again.

MS CASTLEY: In the last session we learned about a Nissan Leaf that is smart enough not to charge at the expensive times.

Mr Rattenbury: Sure. That is a different thing, but in terms of pure range anxiety issues, most people do not necessarily think about it in that way. They think about—

MS CASTLEY: Using it from home.

Mr Rattenbury: Yes. It is definitely one of the barriers that people perceive, which is why we want to roll out more charging infrastructure. That is probably the end of that

train of thought.

MS CASTLEY: The Climate Change and Greenhouse Gas Reduction Act 2010 was passed on 26 October. Section 26 requires that the act be reviewed every 10 years. Section 26 states:

The Minister must review the operation of this Act and present a report of the review to the ... Assembly—

- (a) as soon as practicable after the end of this Act's 5th and 10th years of operation; and
- (b) as soon as practicable after each subsequent 10 years ...

The directorate did an in-house five-year review, with no public or Assembly input. My question is: when will you review the operation of this act?

Mr Rattenbury: In accordance with the time in the act.

MS CASTLEY: And will it be done in house?

Mr Rattenbury: I have not made a decision on that yet.

MS CASTLEY: Do we know who will be leading that? Will it be consultants or—

Mr Rattenbury: No, not at this point.

MS CASTLEY: When will we know?

Mr Rattenbury: I do not have an exact time line on that. I am happy to update the committee, though, when we do.

MS CASTLEY: Yes, please; that would be great, because it will be October before we know it.

Mr Rattenbury: You are right; it does sneak up on us.

MS CASTLEY: That is right. Did you present the report to the Assembly following the five-year review?

Mr Rattenbury: I was not the minister at the time, so I would have to check the history of that. I do not know. I am not sure whether anyone in the room knows the answer to that.

MS CASTLEY: Can you take that on notice?

Mr Rattenbury: Yes, I am happy to do so. It is not something that is in my memory banks, but we will check.

MS CASTLEY: Will you be presenting a report to the Assembly for the 10th year?

Mr Rattenbury: I would expect so. The legislation requires that; yes, I would expect

to.

MS LAWDER: I have a question about water quality in our lakes. Can you remind me how much was spent on the Healthy Waterways project and the break-up between federal and ACT money? What outcomes have we seen so far, and what are we expecting in the near future as outcomes?

Mr Rattenbury: Certainly; I am just pulling my figures up now, Ms Lawder. The ACT Healthy Waterways program began in 2014, and it has been a \$93.5 million joint initiative with the commonwealth. I believe the commonwealth's contribution was either \$83 million or \$85 million, and we provided the balance.

Mr Walker: That is correct, yes.

Mr Rattenbury: In terms of outcomes, there are a couple of ways of describing that. Obviously, there is the physical infrastructure that has been built across the city.

MS LAWDER: An output, maybe, rather than an outcome?

Mr Rattenbury: I am sorry; I am unclear what your question was, or whether that was a comment.

MS LAWDER: In terms of water quality itself.

Mr Rattenbury: Sure; I was getting there. I was about to say that, in terms of outcomes, there are obviously the physical outputs, if you would like to frame it that way, that we have seen across the city, which have delivered a series of benefits, including water quality, biodiversity and community amenity. In terms of water quality outputs, I will ask Mr Walker to provide some info on that.

Mr Walker: Yes, the 20 infrastructure projects, as part of the Healthy Waterways projects, have delivered, as the minister said, a range of biodiversity outcomes. We are seeing increased biodiversity in and around those wetlands, including some significant birds that have not appeared in the ACT previously.

In terms of water quality, the 20 infrastructure projects extract 1,900 tonnes of pollutants per year from going into our wetlands. Twenty per cent of those pollutants were destined for Lake Tuggeranong. That 1,900 tonnes is made up of about 1,800 associated with suspended sediments. They are caught in our gross pollutant traps. The Healthy Waterways projects catch gross pollutants—those larger pieces of rubbish—as well as establishing native vegetation that absorbs nutrients from the water going through the system. Fourteen tonnes per annum of nitrogen is taken out of the system, and 2.4 tonnes of phosphorous is taken out of the system through those Healthy Waterways projects. In the longer term this work and this infrastructure are having a demonstrable impact on nutrients entering the system, with the end game being reduced occurrence of blue-green algae.

MS LAWDER: You mentioned the extraction of pollutants in the GPTs.

Mr Walker: Yes.

MS LAWDER: How much was being extracted in the GPTs prior to these projects?

Mr Walker: I would have to take that question on notice. I do not have those figures available. Recognising that these are new pieces of infrastructure, and they would be basically new gross pollutant traps as part of the project, it would be predominantly new. There are, however, some overlaps of the existing infrastructure as well.

MS LAWDER: Were there new GPTs at Lake Tuggeranong?

Mr Walker: There have been new gross pollutant traps put in in a number of those sites associated with the 20, yes. In terms of the exact numbers of gross pollutant traps, I can provide that. The Healthy Waterways projects were a combination of gross pollutant traps, wetland establishing—

MS LAWDER: I understand that, but you mentioned the GPTs.

Mr Walker: Yes.

MS LAWDER: When you say new GPTs, do you mean replacing or improving the ones that were there?

Mr Walker: I mean new and improved, yes—both.

MS LAWDER: Both?

Mr Walker: Yes.

MS LAWDER: Did you say that there were some new ones at Lake Tuggeranong?

Mr Walker: I believe there are new ones at Lake Tuggeranong, yes.

MS LAWDER: Okay, good.

MR BRADDOCK: What is the future of the waterways project beyond 2021?

Mr Rattenbury: In this year's budget that we are discussing at the moment there is an allocation of \$1.5 million. That is designed to keep a range of projects and expertise going on in the program until the end of this financial year. For the next budget we will need to make further allocations to continue the program, and that has not been determined yet. It is an open question at the moment.

MS CASTLEY: I need to revisit my previous question. I want to note that the act was due for review last October, not this coming October.

Mr Rattenbury: Yes.

MS CASTLEY: Can it be noted that all of my questions have gone on notice? I would like to know when it will start, and when the Assembly can receive a report.

MS LAWDER: Or why didn't it?

MS CASTLEY: Yes; why isn't it done?

Mr Rattenbury: I believe it was due during the caretaker period, so we need to get onto it.

MS LAWDER: It would not have been a surprise, though.

THE CHAIR: I wanted to ask about sambar deer. Is that part of your—

Mr Rattenbury: No, you need to ask Minister Gentleman about that under the Parks and Conservation Service.

MS CASTLEY: I have a question about the zero emissions grants program. On page 176 of the report it lists some grants, each worth up to around 25K. There was the Australian Dance Party, the SEE-Change short film and the Canberra Environment Centre volunteers servicing bicycles. There was also a recipient, JT Clay, for \$11,000 on the Carbon Diet project. Could you tell me a little bit about each of those projects, please?

Mr Rattenbury: Certainly. I can tell you, firstly, about the background of this program. We designed it to make money available to small community groups and individuals who had great ideas on how to reduce greenhouse emissions in the ACT. The quantum was deliberately small in the sense that we wanted to be able to essentially empower community groups to do something where they did not need heaps of money but they needed a bit of money to get them going. That is why you see some quite diverse projects.

The Australian Dance Party, for example, made a series of videos that were designed to appeal probably to a different audience to what the government normally communicates with. I think they had one themed around transport. They had another themed around heating your house. So they went online. They were quite well watched.

The Conservation Council Make the Switch project is another example. That is one where they have created a website so that people can come online, put in their energy bills and their household consumption patterns, and they can be given advice on how to make the switch from gas to electricity. They are the kinds of projects. There are also small community groups, so there are different types.

MS CASTLEY: As an outcome of those, what did they achieve in reducing emissions? How many views of the videos have there been on the website? How many people are checking that out and actually taking action?

Mr McGlynn: The outcomes for different projects are different in nature because the projects are different in nature. We are in the process of looking at how we evaluate those in the best way, and then provide that. Some of those numbers are available. For example, with the Australian Dance Party, I cannot remember the exact number, but there were many hundreds of thousands of web hits—400,000 web hits on the videos

that they produced. That allows us to know the reach of a project.

It is very difficult to go to that next step and say, “Of those people who watched that video, how did they change their lives?” We do not know exactly who those people are. In some sense sometimes we cannot address that final outcome, as opposed to the output. But we have evidence that when people learn about these things and get incentivised to do them or get motivated, they make changes in their life. We measure the outcomes as best we can, given the projects that we have.

MS CASTLEY: For instance, with the short film for 25K, I am assuming this is Jo Clay—the Carbon Diet project?

Mr Rattenbury: Yes.

MS CASTLEY: Has it been a worthwhile investment of money? Have we seen people learning to reduce their emissions? I assume that was the goal.

Mr Rattenbury: Yes.

MS CASTLEY: Of course, it is good to get community engagement, but do you believe that this has been a good spend of cash?

Mr Rattenbury: Across the board, yes, I think this has been an excellent program. It has energised a lot of people in the community to undertake projects. It has empowered them to feel part of the solution. We have deliberately tried to pick some projects that perhaps are a bit outside the usual, to try and speak to different audiences, not just the usual crowd of people who are engaged by these issues. I have always been comfortable that some of these projects perhaps are a little bit different because I think that was deliberately the design of the scheme.

MS CASTLEY: With regard to Jo’s project, can you tell me a little bit about that—the Carbon Diet project? Are we talking about food?

Mr McGlynn: She does talk about food, but that is not the main issue. The Carbon Diet is essentially a program where there is a series of videos and blogs. I am not sure what the individual blog is—messages. They basically take people through and say, “If you want to reduce your emissions, here are bite-sized chunks”—I guess that is how it becomes a diet—“of how you can reduce it. Here’s what you can do about transport, here’s what you can do about energy use in your home, and here’s what you can do about the diet that you have,” because that does have implications for greenhouse.

Again, we have very good evidence that if people see practical advice by people that they relate to, and that it is a relatable experience, they will then be much more likely to engage in those sorts of activities themselves. It is a long series of individual, small steps that people can take to get to the bigger outcome over time.

MS CASTLEY: Was Jo a candidate at the time when she received that money?

Mr Rattenbury: No.

Mr McGlynn: No.

MS CASTLEY: When did the funding come through?

Mr Rattenbury: I would have to check the exact date.

MS CASTLEY: Can you take that on notice?

Mr McGlynn: The recipients of that round—it was announced in September 2019.

MS LAWDER: Mr McGlynn, you mentioned that you were looking at how to evaluate. Is an evaluation plan not part of the grant application for the applicant to complete and acquit their grant, and tell you about their assessment process? Is it up to the department to evaluate?

Mr McGlynn: As part of the acquittal process, we always ask recipients to report on the outcomes that they have achieved which are relevant to that project. Sometimes it is easier to translate those into direct emissions reductions than at other times. We do ask the recipients to report on that.

THE CHAIR: I have a question in relation to the ACT rural resilience grants.

MS LAWDER: Can I ask a substantive on Lake Tuggeranong? There was an experiment on Lake Tuggeranong as part of Healthy Waterways. I think it was run by UC. They had some pens; they did different treatments. Do you know what I am talking about?

Mr Rutledge: Yes.

Mr Rattenbury: Yes, we do.

MS LAWDER: What were the outcomes of this? What do you call it—a project, an experiment?

Mr Rutledge: Yes, experimental project.

MS LAWDER: What was the result? What did they come up with? And how much did we spend on that project?

Mr Rutledge: I acknowledge the privilege statement. The research is ongoing; we do not have a final research product yet. We intend to make that available both to the research community and to the broader community. It has been a long-term partnership. The money we received in this year's budget will further supplement the university work—because the study will need to continue—and go to building new infrastructure in Village Creek, which ultimately feeds into Lake Tuggeranong.

To date, it has been a four-year project with the University of Canberra. We would have given in the order of \$1.3 or \$1.4 million to the University of Canberra institute of ecology. The scientific research will be made available to the research community.

I am not sure if Mr Walker wants to add anything further.

MS LAWDER: Have there been recommendations on what to do to improve the water quality in Lake Tuggeranong?

Mr Walker: The advice and research, as Mr Rutledge has indicated, are ongoing and we are currently assessing the information. The information we have is clearly highlighting that the nutrient load coming into Lake Tuggeranong drives blue-green algae. There is nothing surprising there. However, what is worth noting is the scale of nutrients in the sediments. Because there is existing nutrient in the sediment on top of what comes in, that tips it over into enabling blue-green algae to occur more quickly. That is an important understanding of the system.

We have trialled different knockdown treatments within the lake and have identified a suitable knockdown that can knock blue-green algae down when it occurs—and the best approach for managing that. Those are the sorts of findings that are coming through. That helps us in the ongoing management of Lake Tuggeranong and is applicable to every other lake and pond in the territory.

You will all be aware that the lakes were designed to capture nutrients coming into the system, so they are functioning in the way they were designed. The change in the need for those lakes to be of higher water quality means that we have now started to ask how we can improve water quality. Hence the Healthy Waterways projects. We are also exploring how we improve upper catchment restoration to prevent nutrients and other things entering the system.

MS LAWDER: It must be quite some time since anything happened in those pens or bays in Lake Tuggeranong?

Mr Walker: Yes. As I said, they were recording the amount of nutrient in the water column. That is the information to inform the research. We will be releasing those reports shortly.

MS LAWDER: Who owns the residual infrastructure?

Mr Walker: It is part of our arrangement with the University of Canberra. That infrastructure is the University of Canberra's.

MS LAWDER: It is falling apart. There are bits of it floating around the lake. Why hasn't anything been done about that? Why has it just been left there to decay and fall apart? I have some photos if you like. I kayak there every week.

Mr McGlynn: We will take that advice and get you some information, Ms Lawder.

Mr Walker: We will take that on notice.

MS LAWDER: That would be great. Do you have any plans to improve the gross pollutant traps?

Mr Walker: The gross pollutant traps, as I indicated in my earlier response, have

been improved and upgraded.

MS LAWDER: So no further plans to upgrade the GPTs?

Mr Walker: Our plans associated with water quality and improving water quality include the range of assets—gross pollutant traps, things like floating wetlands and things like wetlands enhancements—which are about improving the water quality in the lakes around the territory.

MS LAWDER: But we have not yet seen the improvement in Lake Tuggeranong. Everyone thinks they are an expert in this area, but some hydrologists have suggested to me that the GPTs are an important part of that and there could be some more work done. Do you have plans—

Mr Walker: Our plans include GPTs.

Mr Rutledge: On that, let me mention a simple thing about the research we are doing. The knockdown agents we tried were Phoslock, Diatomix and hydrogen peroxide. Already the early results tell us that Phoslock is the best one out of those three. That is something we can learn and apply in Tuggeranong and elsewhere. We are learning. As soon as that research turns into something practical, it goes out there. The research is ongoing.

MR BRADDOCK: I have a question on the Climate Change Strategy. It includes action on the social cost of carbon for the government. I was wanting to check where we are at in that process.

Mr Rattenbury: We currently have a piece of research work that has just gone out to tender on the social cost of carbon. It went out about two to three weeks ago. I imagine the procurement will take a bit longer yet.

Mr Rutledge: We have just appointed some consultants to look at that. ACIL Allen is doing that work for us. We will see what comes out of that.

MR BRADDOCK: What would be the time frame to see the benefits of that work?

Mr Rutledge: We will receive a report within months, I would say. I would say we will see the report this financial year. The social cost of carbon is a very interesting and challenging contested space for us. The former Commissioner for Sustainability and the Environment did some work on this. Our Climate Change Council, which advises the minister, did some work on it.

The social cost of carbon is somewhere between \$15 and \$85 per tonne of carbon emissions. When you are talking about that scale of variability, and then you think about the amount, that is a huge number and a huge variability. What we are hoping to get from this consultancy is a narrowing of that number and an indication of how it could be applied consistently across, say, government operations in this first instance.

MR BRADDOCK: I look forward to seeing that report when it comes around.

Mr Rattenbury: As do we.

MS CASTLEY: Minister, are you able to tell me when Jo Clay was endorsed as a candidate—exactly the month?

Mr Rattenbury: Yes, I can. Preselection voting closed on 1 December 2019. The endorsement would have come some weeks after that.

MS CASTLEY: When Jo received the money for her Carbon Diet project, was she a member of the party?

Mr Rattenbury: I do not know.

MS CASTLEY: Are you able to take that on notice?

Mr Rattenbury: I do not know. It is not within my ministerial responsibilities to know when Ms Clay was a member of the party. What I can tell you, given the line of questioning you are going down, is that these grants are decided by a panel of public servants. They are reviewed, and a recommendation is put forward to me as the minister. I have accepted all the recommendations from the committee for all of the years I have been the minister.

Mr Rutledge: Sorry, Minister—

MS CASTLEY: So the directorate did raise it with you?

Mr Rutledge: To be 100 per cent correct, I am the delegate for these grants. The panel was set up. Penny Sackett, who is the chair of our Climate Change Council, chaired the panel. In this set of grants, 16 applicants applied. I believe Ms Clay was ranked fifth of the seven successful. Nine were unsuccessful. They make a recommendation to me as delegate and I review the panel outcomes and agree to those. The only role the minister has is in the announcement of them, rather than in the assessment of them. After I, as delegate, make the decision, we give the minister the opportunity to put out a press release and welcome the grant recipients.

In this case, it became known to us, during the grant process, that Ms Clay became a candidate for the Greens. That was not known at the time. She was not a candidate for the Greens when she received that grant. At that point, Mr McGlynn contacted Ms Clay. Actually, I think Ms Clay contacted us and asked if this was a problem. We reminded her that the grant was not a Greens grant but an ACT government grant and there should not be any sort of cross-promotion. She agreed to do that and she acquitted her grant.

MS CASTLEY: She acquitted.

Mr Rutledge: She acquitted her grant, yes.

MS CASTLEY: Can you explain to me what that means?

Mr Rutledge: We see evidence that she has used the money for what it was put

forward for. That was keeping her blog up to date, producing her videos. All these grants are about raising awareness and engagement. I think she did a 666 interview which had 1,000 people. She did an ABC email newsletter. She provided weekly tips to the Macquarie Primary School. She put articles in the Radford Collegians newsletter. She did a *RiotACT* article. And she did a podcast.

For us, that is what she said she would do. The funding for the project which was deemed to be meritorious by the panel was for that program of works. Once she had acquitted that grant, that was the end of it. As for all the other grants, the Carbon Diet website, the dance party and the other programs that were funded under the grants program still exist. You can still look at the Carbon Diet with Ms Clay, but it was not a Greens thing; it was proudly brought to you by ACT government zero emissions grants.

MS CASTLEY: Are the website and blog still being updated?

Mr Rutledge: No, it is not being updated—or if it is being updated, it is not because we did it. She had a time limit; the grant was for a time-limited period. It was about going on a carbon diet, learning and providing tips over that period. It was to reduce her carbon footprint by 75 per cent. Over that time, she did that. For us, the grant was for community awareness of those tips.

MS LAWDER: Is there a schedule for dredging or removing sediment from our lakes?

Mr Rutledge: There is a lot of community interest in Lake Tuggeranong, as there is in all our water bodies. Lake Tuggeranong is a specific interest.

Mr Walker: The answer, in terms of dredging and sediment, is that there are no plans at this point to do that. We are investigating, and will continue to investigate, the viability of doing that, because that would require a different operation to what we have currently put in play.

MS LAWDER: It might be before your time, but in 2015 the budget included an initiative to see the lakes cleaned on a quarterly basis. I guess that was the GPTs?

Mr Walker: You are correct; it was before my time. I cannot answer that.

Mr Rutledge: We will give you an update, Ms Lawder.

MS LAWDER: Do you have any information on how the lakes compare—which are the worst or best? Do you look at it in that way—the number of days closed, the level of algae and bacteria, that sort of thing?

Mr Walker: We have a number of criteria we use in assessing lakes. One is about the recreational use of lakes. When we have people accessing lakes to paddle, swim and do those sorts of things, there is a monitoring program in place for those lakes. That is reported on through the Health and Transport Canberra and City Services websites, because they are the entities responsible for those lakes. That water quality monitoring is done through those websites. That information is available publicly, routinely. It

includes opening and closing times and those sorts of things. That is reported on frequently during the year.

The other activity that is undertaken is in relation to our Catchment Health Indicator Program. Our Catchment Health Indicator Program is a citizen science based program referred to as Waterwatch. It produces an annual report; I have it in my hand. The Catchment Health Indicator Program reports are released every year. The program is made up of over 232 sites where citizen scientists take water samples. It includes water quality surveys across 1,800 sites, some 184 water invertebrate samples and some 219 riparian condition reports, with over 200 volunteers delivering that program of work.

The report gives us the best indication of the health of our waterways and reaches. The report clearly defines the good, bad or otherwise associated with each of our reaches or those 232 sites. It provides the foundation of our program of work associated with the various Healthy Waterways projects I described earlier.

That is being built on with an additional assessment of which sites would give us the best result if we were able to deploy a gross pollutant trap or other means. That was part of the work that was presented at the start of the Healthy Waterways program to government. There was a list of prioritised sites across the catchments where the best outcomes could be achieved.

MS LAWDER: How much funding does the ACT government provide to Waterwatch?

Mr Walker: I will take the exact amount upon notice. The catchment and Healthy Waterways programs and the Waterwatch program are now funded ongoing. We have been able to secure ongoing investment from the ACT government to ensure that the Waterwatch program continues in an ongoing capacity. We received that last year.

MS LAWDER: Is the report available online on the department's website?

Mr Walker: The report is available online. We will be looking to release the new report shortly, on World Water Day.

MS LAWDER: You mentioned the two government websites, TCCS and another one.

Mr Walker: The blue-green algae closures are available on the TCCS website.

MS LAWDER: Are the signs at each of the beaches or launch points kept up to date? Some of them say "Closed" or whatever.

Mr Walker: The land manager is responsible for that work. In this case, most lakes sit with Transport Canberra and City Services. The lakes and ponds management plan defines the recreational requirements for the lake. It also highlights the need for signage associated with closures for whatever reason. That falls within the responsibility of Minister Steel, under TCCS.

MS LAWDER: So you cannot say yes or no, necessarily?

Mr Walker: I cannot say yes or no.

THE CHAIR: Are there any emerging threats to healthy waterways in the ACT?

Mr Walker: As in any many ecological systems, the emerging threat is climate change. In a climate changing environment, we will see peaks and troughs associated with our waterways. With large rainfall events, we will see large amounts of water and other nutrients going into the system. That will probably be on the back of drier conditions. We will see larger flushes of water going into the system. By default, that means larger amounts of nutrients and/or gross pollutants going into the system. That will be a likely implication of climate change.

MR BRADDOCK: I want to go to the 2025 target of a 50 to 60 per cent reduction in emissions. I am trying to gain a sense of how difficult it will be for the ACT to achieve that. How are we tracking? Will our plans get there? Are they sufficient? Do we need to do more or less?

Mr Rattenbury: In terms of where we are up to, the greenhouse gas inventory that I released late last year showed that the ACT had reduced its emissions by 45 per cent on 1990 levels. Our 2020 target was 40 per cent, as you probably know. Our view is that the 45 per cent was an aberration in the sense that it picked up the COVID period, when a lot of people worked from home and we did not have a lot of traffic on the roads. We believe the true emissions reduction figure was probably around 40 per cent. I think there is about a five per cent margin there. It was a one-off, if you like to describe it that way.

We are on track for the 2020 target. The 2025 target is the most challenging target of the targets we have. By the time we get to 2030, which is the next target after that, I think we will have seen a lot more technological change. For example, earlier we had quite a discussion about electric vehicles. There will be a lot more electric vehicles in the market by 2030, but perhaps not as many by 2025. I think this will be the hardest target to achieve.

In terms of how we will get there, there is no single large source of emissions reduction, in the way that the move to 100 per cent electricity essentially cut out 40 per cent of our emissions. In the transport space there are a whole series of individual people driving around in their cars. That is a challenge. And there is population growth and a range of other factors. We are seeing growth in transport emissions; that is putting a lot of pressure on that target. The short answer to your question is that we are working hard to achieve it, but it will be very challenging to achieve that 2025 target.

MR BRADDOCK: Does that mean there might be more initiatives beyond what is captured in the Climate Change Strategy to achieve that target?

Mr Rattenbury: Yes, undoubtedly. We were very clear about that when we released the climate strategy in about September 2019. There were some measures in there about exploring things and trialling things. The view always was that some of those measures will work—perhaps work better than we anticipated in the strategy; we

might be able to scale those up or they might achieve more than we thought—and some probably will not work as well, might not work at all, or might not be as effective as we had hoped. We will need either to improve those measures or to find new ones to replace them.

I would anticipate that there would be new and additional measures. We saw some in the election process. What is in the parliamentary agreement reflects that, in the sense that most of those items are consistent with the climate strategy; they are the filling out of the details of some areas. So already we have seen some development, and I would expect more of that over the next couple of years.

MS CASTLEY: With regard to the climate action plan, I believe the 2019-25 strategy took a couple of years to develop, and funding was allocated in the 2020-21 budget for the new one. Who is the minister responsible for the next Climate Change Strategy?

Mr Rattenbury: Me.

MS CASTLEY: Do you have a timetable to develop the next one?

Mr Rattenbury: The next climate change strategy? This one runs until 2025, so there are no plans to replace it at this point.

MS CASTLEY: Is there any chance that it will be finalised before the 2024 election?

Mr Rattenbury: No, I would not have thought so, because this one includes 2025. That will be a responsibility for whichever government there is after the 2024 election.

That said, if I am understanding your question correctly, I expect that there might be revisions. For example, the zero emission vehicle action plan expires at the end of this year. That will need to be updated and replaced. That is a subset of the climate strategy.

With the main strategy, you might see different action plans or some new initiatives, but as you alluded to in your question, it took quite a while to put together. It took a lot of community consultation, a lot of community discussion. We do not want to spend our whole time strategising; we want to spend more time doing now that we have the plan.

MS CASTLEY: I understand that when the previous action plan was released, the former leader, Mr Coe, had a really short time frame to read it before being hit with media. I am wondering whether we can get together to work better on this or whether it is just something you will produce and hand out and we will have a short time frame to respond? How do these things work, bearing in mind that I am new?

Mr Rattenbury: As I said, there are no plans to produce a new one this term, so it is probably not a question for me at this time.

THE CHAIR: I want to move to the club building energy efficiency fund. Are you able to talk about that—the costing for that, what it looks like and what is proposed?

Mr Rattenbury: The thinking here is that, as part of the broader gaming policy area, for which I am also responsible—this program actually is administered and sits within EPSDD. Usefully, I am responsible for both.

We are conscious, and this became particularly clear during the COVID period, that the clubs have a range of large fixed costs. As they have grown their premises over the years and made them bigger, with more features, energy and water bills can be quite high for them. As part of a longer term agenda to help clubs be more sustainable, there is funding available to work with clubs to improve their infrastructure, to help them reduce their energy and water bills.

THE CHAIR: How will this fund work? How will clubs be able to get funding?

Mr Rattenbury: We have not done the detailed design work on that yet. With my gaming minister hat on, one of the things I am doing is establishing a ministerial advisory council with representatives of the clubs, the community sector, union representatives and the like—all the stakeholders in the club space. This will be one of questions I will be asking them: “How can we most effectively use this money to support your transition?” It is within that sort of broad intent. There could be different ways we could design it, and obviously the input from the stakeholders would be valuable in thinking that through.

Mr Rutledge: Mr Braddock, I do not want to confuse my economists, because I never would confuse one economist for another, but when I said ACIL Allen earlier, that was incorrect. Actually, we are getting Nicki Hutley at Rovingstone Advisory to do that social cost of carbon. The timing and public release are still the same, but I mentioned the wrong economists; I apologise.

MR BRADDOCK: Thank you for confirming for me. I was really focused on who was delivering that. Coming back to emissions, there are a lot of programs aimed at households and residential but no programs aimed at businesses to convert them from gas. Is this something the ACT government might be looking at down the track?

Mr Rattenbury: Yes. There are a couple of things, Mr Braddock. We have a range of business programs through Actsmart. Going to the second half of your question, that has not been focused on gas transitions so much at this point. So far, the program has tended to focus on energy efficiency, and there has been some work with the business sector in helping them install solar.

We did some research and got very interesting feedback. It makes sense for businesses to spend money on solar; the return on investment is very high in the sense that, depending on the system, you get a three to five-year payback. The research showed that businesses lacked confidence in making that investment because they felt that the companies that came to them were trying to sell them something. We implemented a program where government gave them independent advice on the scale of the system to fit on their roof and roughly what it should cost. We found that was quite useful in giving them more confidence to invest. They are the business programs we have been doing, as well as recycling and a range of other things.

In terms of the transition off gas, one piece of work we will be doing over the next 12 months or so is developing a gas transition strategy. How we deal with the business sector will be a really important part of that piece of work. So watch this space, and I would be happy to talk to the committee about it in future hearings.

MR BRADDOCK: Mitchell traders also raised with us the issue of businesses that rent but do not own their facility and how they can access solar. I would be interested to see how that can be addressed during that effort.

Mr Rattenbury: Sure.

MS CASTLEY: I have questions about the e-bike library program.

Mr Rattenbury: Yes

MS CASTLEY: SEE-Change funded the electric bike library. How much money has been allocated to this scheme?

Mr Rattenbury: Let me just get the details on that for you.

Mr McGlynn: If I might, Minister, the total allocation for the 2019-20 financial year was \$100,000, of which \$89,000 was spent. This year, we are looking at up to the same amount, but so far about \$19,000. The bulk of that has gone to SEE-Change for two purposes. One is to purchase bikes, although we actually own those bikes. The other amount, about \$55,000 or \$60,000, has been for them to run that program. That is, we think, an extremely efficient use of that funding, in that SEE-Change do an amazing range of activities. They talk to the community; they arrange the leases; they arrange insurance; they hold trial days, where people can come and try out the bikes; as well as managing all the processes, including insurance and delivery and things for the bikes that are working.

So far, about 450 people or families have requested a bike loan, so there is quite an excess demand for that. So we have worked with SEE-Change for them to arrange to lease another three bikes so that they can increase the scope of that program. Most of the feedback that we get from people is that once they try the bikes, they enjoy the experience. They find it quite useful. That is exactly the experience we are looking for—to make sure that people get that experience and see how positive it is. Now we are looking at making sure that we collect some data on how many of those positive experiences translate into purchasing or permanent use experiences.

MS CASTLEY: When did it start and how long do we anticipate this will run?

Mr McGlynn: It started last year, and we would anticipate that it will run for a year and a half or two years, probably. Before we get to the end of that time we will do an evaluation and see whether it is a program that is worth continuing.

MS CASTLEY: Is the goal to get that conversion? Obviously, if 450 people have had a go we want more people to actually go and purchase a bike.

Mr McGlynn: Yes. That is the intent of it—that they make a permanent change.

MS CASTLEY: Yes. Can you tell me what sort of people are getting involved?

Mr McGlynn: I do not have specific detail on those, but they seem to represent the community fairly widely. There are families, individuals and people looking for work experiences. In the bike library there are a number of different types of bikes. There are what one of my colleagues refer to as “bike bikes”, which are just electric bikes that look like any other bike. They are often used for commuting to work or commuting around town. There are also cargo bikes—I do not know if you have seen them—that have a kind of cargo bit on the front where you can carry children, as long as you do all the right things with that, or groceries or those sorts of things. So the electric bike can be not just a personal commuter device but something they can use for deliveries or picking up things or more sorts of activities.

MS CASTLEY: Just so I am understanding, do the SEE-Change people have the money to purchase the bikes or does the government purchase the bikes and lease them to SEE-Change? Just clear that up for me.

Mr McGlynn: The exact transaction path I am not actually familiar with. We effectively gave the money to SEE-Change to purchase the bikes, but we retain ownership of the bikes at the end of the program.

MS CASTLEY: And do you know how many bikes they have?

Mr McGlynn: They have seven that are owned and then three leased ones.

MS CASTLEY: Seven owned and three leased.

Mr Rutledge: I will talk about the purpose of the program. This is where I think a “come and try” day is really working. Hardcore cyclists will be hardcore cyclists forever, but we know that e-bikes are for people who are not hardcore cyclists. We believe that the reason that they do not undertake active travel or an alternative travel method is because they have to pick up kids or they go to the shops on the way home. We are trying to displace private car use with e-bikes. What we see is that once people ride an e-bike, people who have not ridden a bike for a long time—not your hardcore cyclists but the occasional cyclist or the non-cyclist—find that the e-bike is easier to use and can do some of those other things.

When you go to the shop and you see that an e-bike costs \$1,500 to \$4,500, that is too much of a barrier. We think the library shows—or even just the “come and try” day works—that if you borrow the bike for a week or two weeks, at the end of that period of time you have worked out how to integrate that into your daily travel commutes, and then actually you go on to purchase an e-bike because you displace a vehicle. That is what we are trying to do through this program, and that is what it is delivering. So it is not for cyclists; it is for people who see a cost barrier for an e-bike, and not knowing how they can use it in their everyday lives. We are just trying to get over that hump, and that seems to be working.

MS CASTLEY: I understand. I guess what I am trying to find out is who is signing up to this process? What sorts of people? You must have figures. Are they mainly

from the city? Are they from Tuggeranong?

Mr Rutledge: Yes, we will get you an update on that.

MS CASTLEY: Yes, okay. Also, I find it hard to believe that the program has been going for a year and will possibly go for two years, and the goal is to get people to actively purchase, and you do not have those figures till the end of the program.

Mr McGlynn: If I can clarify, the program started—I cannot remember the exact month—not a full year ago. So it has been going for a few months. We do have some figures. A lot of the people were surveyed at the end, and 94 per cent of them have said they could see themselves buying an electric bike at the end, so they have an intention. We just have not run the program at this stage long enough to know how many of those transitioned to actual purchases. We will be doing that over the coming months.

MS CASTLEY: I would like to be kept up to date on that. It sounds interesting, but I would like to know about that because of the amount of money that goes into it to get people purchasing the bikes. Otherwise it is just fun—like a Segway tour. So it would be good to know.

MR BRADDOCK: I am not sure if this one actually is under your responsibility, minister, but—

Mr Rattenbury: We will do our best.

MR BRADDOCK: Do you have information as to how far we have come in developing legislation for minimum energy efficiency requirements for rental properties, and time frames for the completion of that effort.

Mr Rattenbury: Yes, that sits in both my portfolios as Attorney-General, with responsibility for the Residential Tenancies Act, and also EPSDD are doing the work on the background to it. So, yes, we can probably answer that. In terms of the work on it, there is a commitment to proceed with that. There is currently a regulatory impact statement being undertaken, and Mr McGlynn might be able to give you the details of the time line on that.

Mr McGlynn: Yes. There has been, basically, an analytical stage of this, so we have been looking at the options for how minimum standards for rental properties could be implemented, and making sure that we have an understanding of what the ranges of options are. One of the things we have been thinking about is that a lot of people, I think, started from the idea that this would be a ratings tool approach—that you would have to get a rating for the building. That is an option, but there are also elemental approaches, where you require insulation, roof insulation or various other things. We have been doing some work on trying to figure out at least what the scope, broadly, might be for these sorts of things.

Having done that, we have just commissioned a consultant to undertake a regulatory impact statement of that. That will be a process of examining this in more detail, getting more detail on the costs and benefits, and having a consultation process with

the community to see what works with that. We would expect that to be done in the next couple of months with a view to having a legislative approach ready toward the end of this calendar year.

In doing that work we also want to make sure that this links with the vulnerable household programs that were mentioned earlier in this session or the previous session, which is a commitment the government made of \$50 million to help vulnerable households to make the transition to more sustainable energy use. And in there, as an identification of one of the targets for that program, we will be providing assistance for owners of the “least well-performing”—that is the term—rental properties. The intention is to make sure that these programs link together. So there is a move to a clear indication of where the regulatory environment will go, at the same time providing assistance so that landlords are able to make some of those changes more easily.

MR BRADDOCK: Thank you.

MS CASTLEY: I have a question on solar battery storage in homes and small businesses. In the report, on page 81, there is a table that shows the staged rollout of the solar battery storage for homes and businesses. How much money has been allocated for this scheme?

Mr Rattenbury: Let me give you some figures on that.

Mr McGlynn: I think you are referring to the Next Gen program, which is the program of putting batteries into homes. That is the one I think you referred to earlier, where there is about six megawatts of storage.

MS CASTLEY: Yes.

Mr McGlynn: That program has been running for a while. That program is funded out of the Renewable Energy Innovation Fund, which is a program that was developed from earlier rounds of our renewable energy auctions. When we went through the auctions to ensure that the ACT had enough renewable electricity to meet our 100 per cent renewables target, and when we went out for auction and then wrote the contracts, that included certain commitments for those companies to make within the ACT so that they would deliver some business development benefits and economic development benefits as well as the actual renewable electricity. That program is funded out of those funds. In some sense, the cost to the ACT government is none, because it is funded out of those funds. I do not actually have in front of me—

Mr Rutledge: As at December 2020, 1,633 installations were done under the Next Gen program, with an average rebate of \$4,125. It is 1,633 households, and an average rebate of \$4,125.

MS CASTLEY: Is it just households that have taken it up, or have businesses got involved as well?

Mr Rutledge: It has largely been households, because of the small scale of it. We and

the minister have recently taken some representations from business, because they are looking for larger scale batteries. To date, the uptake has been at that small scale, residential scale. Given the representations, we are looking at whether we are doing something wrong for businesses, because currently the offer is not attractive to businesses. We might have to reconsider that.

Mr Rattenbury: I have just done a bit of maths off Mr Rutledge's figures. It comes to \$6.7 million, roughly. We will check those figures and, if it is substantially different from that, we will advise the committee.

Mr Rutledge: Yes. My figure is \$6.6 million.

Mr McGlynn: Under the big battery program that the Chief Minister talked about in an earlier session, we are looking at how to have all of our battery support integrated into a holistic whole. There is this program. There is the sustainable household loan scheme, which includes batteries. We want to make sure that it all fits together. It may be that the Next Gen program can focus on households and, as part of some of the other arrangements, there is something else for business. We know that there is interest in the business community in batteries, so we want to find out how to deliver that.

MS CASTLEY: Is that why it has been extended to encompass businesses as well?

Mr Rutledge: It is a continuing program. We intend to continue it while there are funds available. Currently, as the minister said, \$6.6 million has been expended. Under the Renewable Energy Fund we have up to \$25 million, so—

MS CASTLEY: It can go on until we expend \$25 million?

Mr Rutledge: Yes, it can go on to \$25 million. If we need to change the program design, which we are starting to consider now, we will do that. We have just released round 5. We got more players, small retailers, in this time. We also got, for the first time, strong feedback from business that it is not working for them at the smaller scale.

MS CASTLEY: You said “program design”; are you changing that?

Mr Rutledge: We are considering how we fix it for business. We have had that feedback; now we have to say, “Okay, this program seems to have worked for residential. It seems not to have worked for business, so we need to do something different.” As was discussed earlier, with something like Mitchell traders, you could package up a few of those and do something quite large, but that would require both technical expertise and assistance from us, probably, and probably also government direction.

MS CASTLEY: What is the feedback from homes? Do you follow up with them?

Mr Rutledge: They certainly follow up with us.

MS CASTLEY: I imagine they would.

Mr Rutledge: Batteries are still an emerging technology, I suppose, for many households. It is not particularly common. When the feed-in tariff first started, it was more a case of the energy geeks who got the solar panels first. Batteries at the moment are not being taken up by most mainstream homes, rather than not being a mainstream product. Normally, the early adopters are the ones that are in the battery space right now. The feedback that we get is that it is about getting the scale of your PVs correct. We are looking at large—

MS CASTLEY: PVs?

Mr Rutledge: With solar panels, it is about the number of solar panels that you have. Most people who are installing batteries are doing 10 kilowatts—quite a large install. Most people now are doing large installs of about six kilowatts. If you had asked us a few years ago, the average size would have been two or three. That is because the efficiency of panels is increasing a lot, and people are seeing the ability to control their bills. So we are seeing larger installs; then the batteries are still in that high-end market.

The feedback we are getting is that, with most people who take the plunge into getting a battery, they almost live off-grid, in that they end up managing their energy throughout the day, and managing the way they use their devices. They are selling power back into the electricity grid at some point. They are largely off-grid; that is where they get to. But that is not for everyone. As you can see, it is in the small number of thousands.

MS CASTLEY: 1,633.

Mr Rutledge: Yes, 1,600; it is not a mainstream product yet.

MS CASTLEY: So that I am clear on the process, people go for one of these loans, a zero interest loan, to get the panels and the batteries?

Mr Rattenbury: Not yet. That program has not started yet.

Mr Rutledge: Under this program they would go to an approved retailer that sold batteries and solar PV.

MS CASTLEY: How many of those do we have in the ACT?

Mr Rutledge: It is now six or seven, under this program. There are plenty of solar PV installers in Canberra, but I am talking about this program. They are accredited; then they would receive a grant, as I said, in the order of \$4,125. That would be a price reduction. For a household, for this sort of product, they would still be up for \$13,000 to \$15,000, so you have to be a pretty keen consumer to take that on.

MS CASTLEY: Absolutely.

Mr Rutledge: That was my point: this is not yet mainstream. That is why part of the rationale for the government's loan scheme is that that upfront cost would be prohibitive for many families. But with a zero interest loan, and if you thought that

your energy bill reduction would be as sizeable as some of the current households are experiencing, it might be able to net out. We would have to work with each consumer to work out those numbers for them.

Mr McGlynn: Almost all, if not all, of these recipients are also tied into a virtual power network. Basically, by having a PV system and a battery system, it means that they produce electricity; at times they can generate electricity. They can manage how they balance those things, based on what electricity prices in the national market are doing. Prices go up and down, and by having this virtual power plant, as a group, they can actually bid in for energy when it is at very high prices and bring in energy when it is at relatively low prices. It was quite a progressive program when it started because that was something that was just being imagined at the time. Now we are getting real experience in terms of how that works.

This program has also made all of the data available in an itemised way on a public website. We have a lot of interest from researchers all over the country that are saying, “We can now look at how that interaction with the grid”—which is how the grid is moving—“actually works.” It provides not just savings for the household but also a real-time research facility in terms of what the new electricity market is likely to look like in the future.

MS CASTLEY: Households can do this trading?

Mr McGlynn: Normally, it is done centrally. As part of their purchase they often sign a contract with a provider, who provides all of the software that allows them to do that. But they can see what is happening.

Mr Rattenbury: They have an app on their phone.

MS CASTLEY: It is almost like with shares: up or down; in or out.

Mr McGlynn: Kind of.

Mr Rutledge: Day trading at five-minute intervals.

Mr McGlynn: Yes.

MS CASTLEY: There are six or seven providers for the program. Is that enough?

Mr Rutledge: We go out broadly and say, “Who wants to do it?” We then ask them what level of rebate they want. It is an interesting procurement option. I will explain it in this way: this company will be able to offer it at \$19,000, but they will do it if we give them a \$4,000 grant. This company will offer it at \$17,000 if we give them \$3,000. We then get, at this stage, the seven most competitive. We want people that know the business, are local Canberrans and are safe operators. There was more interest in the program than the ones that we offered the rebate to.

As to whether that is enough, in the last round we did, we had, say, a dozen companies apply, and we awarded seven. When we did the first round some years ago, there were only two players in this space. So the industry is growing. As it matures,

I think we will see the price of batteries come down. I think the loan scheme will help a lot of consumers. We were talking about the loan scheme earlier. The Chief Minister and the government have made sure that when we do the loan scheme it will be with respect to approved and accredited installers. We will not see a ballooning of the market.

MS CASTLEY: Is the \$25 million there until it is used up?

Mr Rutledge: Yes.

MS CASTLEY: Not until a certain time?

Mr Rutledge: Correct.

MS CASTLEY: If, for instance, everybody wants to jump on board, it is first in, first served, and the six to seven will be busy little bees putting this in until we have used up \$25 million?

Mr Rutledge: We will keep doing them in rounds until the \$25 million is used up. But when we say that, that is some years away. It has been \$6 million in the four years to date. Unless there is a total run on batteries—as you say, if the six or seven are busy little bees and everyone gets the install and takes it up, we could exhaust that money, but I think it is still a couple of years away.

Mr Rattenbury: The interesting question would be: if it was so popular, do we need to extend the program? Through economies of scale, prices might have come down, and we would not need it because it would be a more mature industry. We would have to evaluate it at that point.

MS CASTLEY: I have had emails from people who have been unable to get it done. There might be a need to review, because it was a few months ago, the rounds of—

Mr Rattenbury: Was this from installers?

MS CASTLEY: Yes, from someone wanting to get it installed. Apparently, they were unable to find an accredited installer available.

Mr Rattenbury: When you have a look back at that, feel free to send them our way or send them to the EPSDD website, where the installers are listed, and they can see who the seven people are.

Mr McGlynn: There is the Renewable Energy Innovation Fund, and this is one of the programs funded out of it. There are other activities funded out of that fund. We have provided funding to the ANU battery integration group, which is now Australia's leading research organisation on how batteries can be integrated in terms of both technical issues and regulatory and administrative issues. There are a number of other projects. The amount of funding that is left is probably less than that amount of money. We continue to look at how best to utilise that funding over time.

MS CASTLEY: Does that part of the funding bucket cover the costs of your

department? Is it a true, for instance, \$25 million on this scheme or are there administration costs?

Mr Rutledge: There is an administration cost that comes out of that, for one staff member over that—

MS CASTLEY: That would be the person who is doing program redesign?

Mr Rutledge: Yes. Program redesign, managing our relationship with the ANU, going to Gene's point, and also running the procurement for those installers; and customer feedback.

THE CHAIR: Is any consideration given with these schemes to engaging with culturally and linguistically diverse communities in the ACT on how to get the message across? These are quite complex schemes for the layperson to understand, let alone if English is not your first language.

Mr Rutledge: Certainly, we would say that, with all of our communications as a directorate, we try to ensure that we are very accessible. You are right, in that when we are talking about very technical things the Actsmart program offers different entry points. That becomes really important. We see the Actsmart program as a gateway to these programs. We do ones for older people, and we do ones for culturally and linguistically diverse communities. We have engaged with the Aboriginal and Torres Strait Islander communities. It is really about trying to make the front door accessible. Once they have shown interest then it is about taking them on that journey.

MR BRADDOCK: I have a question in terms of how we make sure our targets are kept in line with the best science that is available. For example, we have set our targets but the scientists might come back very shortly and tell us they need to be adjusted. How would we do that process?

Mr Rattenbury: I will start with the history. The targets that are in place now were recommended to the ACT government by the Climate Change Council, which was established under the act. It has a series of experts on it and they used their scientific expertise to recommend to the government a series of targets. We adopted those targets that were recommended by them.

In terms of future targets, the Climate Change Council could make a recommendation to the government. I could ask them to update their recommendations or review their recommendations if we saw significant new science coming out. For example, at the Glasgow climate summit this year, if there is a big shift and targets are heavily revised, including if the federal government makes a more ambitious target for Australia, we might need to recalibrate in that context.

At the moment we have the most ambitious targets in Australia. Globally, they are towards the leading edge. At this point we think we are consistent with the science, but the science may change and, if it does, we would review.

MS CASTLEY: I have a question on the cost-effectiveness of the greenhouse gas abatement measures. Can you tell me what they are?

Mr Rattenbury: Are you able to be any more specific? I am not quite sure what you are trying to draw out.

MS CASTLEY: I want to know what these abatement measures for greenhouse gas are.

Mr Rattenbury: We have a whole series of abatement measures. For example, a large-scale feed-in tariff and a small-scale feed-in tariff have been a couple of those programs. There are a range of things that we have talked about today—the e-bike scheme and the community zero emissions grants. There are a whole series of things we are doing that are designed to produce greenhouse gas abatement.

MS CASTLEY: My questions are around the cost. Do we believe that we are getting the best out of our taxpayer money for all of these many different measures? There seem to be quite a few of them.

Mr Rattenbury: Yes, there are. The reason there are so many is not to make it confusing but to try and think about what each of the sources of emissions is and think about programs to tackle that. As I touched on earlier, in some ways, the move to 100 per cent renewable electricity was the low-hanging fruit, in that government just set the policy and did it. For householders there was no change, other than some cost that goes on their electricity bill. Beyond that, people just flipped the light switch and nothing different happened.

Future emissions—transport is now around 60 per cent of our emissions, natural gas usage is 22 per cent and there are various others—require more behaviour change and community participation, which is why the programs are now more about trying to engage the community.

In terms of your question regarding cost-effectiveness, this came out when we released the climate strategy, when people said, “What’s it going to cost to implement this climate strategy?” We did not have an answer for that because some of them still need to be designed. I can assure you that, every time we design one, we try to make sure that it is as cost-effective as possible, in terms of both what government needs to spend and any cost impact on the community.

MS CASTLEY: People are happy to pay if they know that it is working.

Mr Rattenbury: Yes.

MS CASTLEY: How do you measure that?

Mr Rattenbury: Through our greenhouse gas inventory, we are able to demonstrate that we have reduced emissions by 40 per cent so far. That emissions inventory is produced every year. There is a 12-monthly report that I table in the Assembly, so it is available to the Assembly; we usually also put out a press release, and it goes online.

MS CASTLEY: There is a table with all of the actions and how they directly reduce—

Mr Rattenbury: Not the individual actions, no. The inventory is an overall inventory, by sector. It will talk about the electricity sector, the transport sector and the waste sector—things like that. It is not per program, no. The data is not available at that individual level because greenhouse gas measuring is quite hard, as you can imagine. For example, transport emissions in the ACT are measured by a proxy, which is fuel sales. The number of litres of fuel in the ACT are put through a little formula and that produces an amount of greenhouse gas emissions from transport. That is the best measure we have of how to measure transport emissions, for example.

MS CASTLEY: Do you have a table that shows all of the different measures that we currently have in the ACT? Are we able to get one?

Mr McGlynn: The inventory produces an inventory of emissions by different emission sources. The minister also releases an annual report which talks about all of the activities undertaken. There is no table in there that says, “This measure delivered this.” Various reports talk about some measures where the emissions savings are easier to measure and cost. When we look at the EIS, we have an assessment of what the cost-effectiveness of that is, but there are some where that is harder to do or, in fact, it is not consistent with the intent of the measure.

There are some measures in the climate change strategy, for example, which are really just about transitions. They are not about lowest cost emissions abatement; they are about making sure that everyone in the community can participate in that transition that needs to happen. Under the EIS, for example, we have a priority household target. We know that that increases the overall cost of meeting an emissions target, but it is done because the government agreed that low-income households should be part of the system. There is no individual measure that says, “This is the most cost-effective way of doing things,” because it is trying to achieve a number of things at the same time.

MS CASTLEY: Can I get access to that report on all of the different measures?

Mr Rattenbury: Yes.

MS CASTLEY: Whereabouts do I find that?

Mr McGlynn: We can send you the link.

MS CASTLEY: That would be wonderful.

Mr Rattenbury: The annual report is tabled in the Assembly, but we will provide that link to you, in terms of knowing what it is and what its status is.

MS CASTLEY: Who reviews all of the different measures and decides, “This one was rubbish. We should stop that. This one was amazing. We need to keep this one going”? Who is responsible for deciding all of these things?

Mr Rattenbury: Essentially, me, through the directorate. The directorate does all of the work and the research, sometimes in partnership with consultants. That is our

responsibility, as the portfolio, in broad terms. Ms Castley, just as an aside, if you want to follow any of this up, I am very happy for officials to come and brief you about particular programs and the like.

In terms of your question about accountability, it would be fair to say that committee members, members of the Assembly, are another part of that because they ask the questions about programs. That forces us sometimes to answer a particular question that might shed light on things. That is another way.

THE CHAIR: Thank you very much, everyone, for your time today. If witnesses have taken any questions on notice, could you please get those back to us within five working days? The hearing is now adjourned.

The committee adjourned at 4.39 pm.