



**LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL
TERRITORY**

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

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

Members:

**DR M PATERSON (Chair)
MS J CLAY (Deputy Chair)
MS L CASTLEY**

TRANSCRIPT OF EVIDENCE

CANBERRA

TUESDAY, 1 MARCH 2022

**Acting secretary to the committee:
Dr F Scott (Ph: 620 75498)**

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	34
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Amended 20 May 2013

The committee met at 1.30 pm.

Appearances:

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

Chief Minister, Treasury and Economic Development Directorate
Engele, Mr Sam, Coordinator-General, Office for Climate Action

Environment, Planning and Sustainable Development Directorate
Rutledge, Mr Geoffrey, Deputy Director-General, Sustainability and the Built Environment

THE CHAIR: I declare open the second public hearing of the Standing Committee on Environment, Climate Change and Biodiversity inquiry into annual and financial reports for 2020-21. In the proceedings today we will hear from the Minister for Climate Action and the Minister for Water, Energy and Emissions Reduction.

On behalf of the committee, I would like to acknowledge that we meet today on the land of the Ngunnawal people, and we respect their continuing culture and the contribution they make to the life of this city and this region. We would also like to acknowledge and welcome other Aboriginal and Torres Strait Islander peoples who may be attending or watching today's events online.

In this first session we will hear from the Minister for Climate Action. On behalf of the committee, I would like to welcome and thank Minister Andrew Barr and officials for appearing today. Can I confirm for the record that each of you understands the privilege implications of the statement?

Mr Barr: Yes.

Mr Engele: Yes, I do.

THE CHAIR: When taking questions on notice, it would be helpful to the committee if you could state the words, "I will take that question on notice." We are not inviting an opening statement today; we will go to questions. Chief Minister, regarding the Sustainable Household Scheme, could you provide some detail on the numbers of loans and types of products that the scheme has seen so far?

Mr Barr: Yes. We have had 3,444 applications, of which 3,131 have been approved to date. The total value is \$33.77 million. Of those 3,131 that have been approved to date, 1,968 have been installed, to the value of \$20.27 million. The type of products include 1,798 rooftop solar only; 570 solar and battery combination; 479 heating and cooling updates—essentially, a switch from gas to electric, or from old electric to new electric; battery storage, 301; hot-water heat pumps, 244; electric stovetops, 28; new EVs, eight; used EVs, nine; and EV chargers, seven. There is a total of 3,444 applications. In terms of installations, the figures are 1,057 rooftop solar only; 296 solar and battery; 302 heating and cooling; 137 battery storage; 168 hot-water heat pumps; 17 stovetops; seven new EVs; seven used EVs; and three EV chargers.

The scheme is being well utilised across a diversity of product types. I am particularly pleased that it is achieving a very significant switch from gas to electric.

THE CHAIR: In terms of the rooftop solar, given that that is the biggest switch that people are making, or engagement with the scheme, is that what was predicted when the scheme was rolled out—that rooftop solar was going to attract the most number of loans?

Mr Barr: Solar, plus solar and battery, and the heating and cooling, were the major areas expected. I would advise that the photovoltaic capacity installed now is 12.1 megawatts, which is larger than the Willamsdale Solar Farm, which is 11 megawatts. It is looking like the capacity under the scheme will end up being larger than the Royalla farm, which is 20 megawatts, inside the next couple of months.

MS CLAY: Chief Minister, I am interested in that breakdown of the contribution of the rooftop solar to the grid versus some of our larger farms. We have had some really good briefings from your office about how we are going to stabilise our grid and make sure that we have the right energy mix, moving forward. I know there are a lot of different ways that you can do battery storage. We have noticed that there is increasing pressure here, and around the world, on urban land, when we have large farms, but we do not seem to have that problem when we have rooftop solar or community grid solar. Have you noticed that? What is your policy framework, moving forward, to make sure that we are not accidentally putting different environmental uses of the land into competition with one another?

Mr Barr: Yes, it is a reasonable point to raise. We are not yet at a point where we have no available land for large solar farms, but we do not have unlimited supply. Clearly, utilising existing rooftops and new rooftops is a sensible way to proceed. The Big Canberra Battery project does enable a distributed network of battery storage as well; so you can locate batteries in a variety of different locations. I will ask Mr Engele to talk a little further about the intersection of the Sustainable Household Scheme with the Big Canberra Battery.

Mr Engele: As the Chief Minister said, the SHS has the battery component to allow households to absorb their own generated solar energy, which forms one part of the framework. Also, the Big Canberra Battery has three streams. There is one large scale, which is your typical big battery, and that is a transmission scale. The other two streams are in the distribution network, so they benefit from rooftop solar generation. There is a stream where we are looking at putting batteries into government facilities such as schools and other community facilities, so that they can utilise their own generated energy and provide network services to the grid.

The other stream is to investigate and to roll out neighbourhood-scale batteries. They are batteries that look about the same size as the NBN boxes. They would be located at points on the network, and where there are high levels of household solar. That is an opportunity to work with Evo to better absorb that solar generation from rooftop solar across the network.

MS CASTLEY: Chief Minister, have you identified any barriers to participation yet?

Mr Barr: By consumers or suppliers?

MS CASTLEY: Consumers first; also suppliers.

Mr Barr: Credit checks, the ability to repay the loan, would be one such barrier. There are obviously other schemes that assist those who would not have the capacity to repay even an interest-free loan. There are some exclusions at the upper end of the scheme, related to total asset holdings and land value, or land value principally, that exclude some households because they have enough wealth and they do not need an interest-free loan. They are the barriers at either end of the spectrum.

From the supplier side, clearly, there are a range of measures in place to ensure that suppliers are able to undertake the work, that they are accredited, that they will do the work at a fair price and meet the appropriate safety and other standards. I will invite officials to talk through those requirements.

Mr Engele: There is a requirement for suppliers to be CEC certified, with the Clean Energy Council, and to have ACT electrical licences. In relation to the question about reasons for individuals not being able to access the scheme, the categories include no serviceability, in that, once they have done their credit checks, they do not believe that the applicant has the financial capability to repay the loan. A poor credit score means they have a history of not repaying loans. Another is the UV limit, in that the land value limit is exceeded on the site. That is a criterion within the scheme. They are the three key “decline” reasons that we have.

MS CASTLEY: Are you collecting data for those installation businesses? Could we get a breakdown of what percentage of them live in Canberra, and work and operate out of Canberra?

Mr Engele: The total amount of approved loans that have gone to local vendors is \$26.2 million, or around 80 per cent of the loans originated.

MS CASTLEY: So 20 per cent are out of town. I am wondering about the demographic of the people purchasing, the applicants. Are you able to give us a picture of what that looks like?

Mr Engele: No, I do not have that information at hand, Ms Castley. We can get grossed up averages for you, but we are unable, obviously, to provide individual-level data. We can take that on notice and see what we can find.

MS CLAY: Minister, we have around \$62.45 million in our climate action funding across a range of programs. We have fleet upgrades, office upgrades and a number of schemes, including the Sustainable Household Scheme. I did a very rough analysis of that and it did not look like there was an awful lot dedicated to communication and behaviour change. There was a little bit of money for the CZE grants, and for communication behaviour change programs, but that was about two per cent of the funding. Across that whole funding pool, how much of that is actually being put into behaviour change, and do you think we have that balance right?

Mr Barr: I will need to take on notice the proportion and exactly how you have calculated that figure. Obviously, communication budgets extend to whole of government, and there are areas where particular priorities are communicated in a number of different communication streams, if you like. It is probably easier to take it on notice and provide some information. But rest assured that the extent of government communication is not contained in this small area of total appropriation. Clearly, we have limitations on our budgets in every area, so there are not unlimited communication budgets either.

MS CLAY: I would love to get some information on notice. That will probably involve analysis of what communication you have with each of those bits of the program. Where that is a behaviour change program, can we look at how we are measuring whether behaviour is changing, as part of that? It would be really good to see what is value for money and which behaviour change interventions are working. I know that is one of our big problems with climate and sustainability.

Mr Barr: Indeed, yes. It may be difficult to directly attribute any one campaign to particular behavioural change. There is a range of factors; there is a whole study of behavioural economics that we could go into, in relation to what little nudges might shift the dial for people on particular, different responses. We will do our best to put something together.

MS CLAY: I would love to see it when it comes back. I am interested in behaviour change across the board, including transport, which is not your field, obviously. I know we are doing a lot of behaviour change programs, and it is difficult from the outside to see which ones are working and how we are measuring success. It would be great to get a bit of thinking on that, so that we can look at it.

MS CASTLEY: I have further questions on the Sustainable Household Scheme. Is the territory or Brighte responsible for debt recovery if that should occur?

Mr Engele: Brighte are responsible for debt recovery. However, we do have an understanding with them about how that would take place. They are operating within the standard Australian guidelines for debt recovery. There is also an ability for them to provide us with information on people that they think are in financial hardship, so that we can provide other government services that may be required.

MS CASTLEY: The likelihood of interest rates rising: what modelling is being done to take that into account?

Mr Engele: The scheme is a zero interest rate scheme for customers. The ACT is the credit provider, in relation to providing the capital for the scheme. That would come down to just our own borrowings, which are less influenced in relation to interest rate rises than household mortgage rates. That analysis sits within the balance sheet of our total level of government debt.

MS CASTLEY: Has that been taken into account? What will be the impact on government debt?

Mr Barr: We borrow on 10-year fixed terms, so our borrowings are fixed. The cost is

fixed, so it is known. It is low impact, Ms Castley.

MS CASTLEY: Great. Is there a complaints mechanism, and who is handling these?

Mr Engele: There are multiple avenues for complaints because there is a whole range of different contractual relationships. I will run through those.

With the borrower, they have a loan relationship with Brighte, but they have a product relationship with the supplier. If there is an issue with the product—say, if the solar system is not functioning correctly and it is under warranty—they would have a warranty period through the contract, and they would have an ability to go back to that supplier and seek rectification.

If the issue is in relation to the loan itself, and there is a complaint in relation to how the loan is being administered, they would have an ability to go through to Brighte. We also have the Actsmart helpline, which has the ability to take any concerns that we are getting from the community about the operation of the scheme. That is an extra avenue for the government to hear about any issues.

MS CASTLEY: Has the business case for the household scheme been released to the public? Are we able to get a copy of that?

Mr Barr: The business case for the scheme is cabinet-in-confidence. Funding has been appropriated, but the cost is at the 10-year bond rate, on the \$150 million, plus or minus adjustments, fiscal year to fiscal year, based upon take-up of the scheme and injection of private capital. The outcomes, in terms of emission reductions and take-up of the scheme et cetera, are obviously reported, and I get asked that question at every hearing. So we will update those regularly.

MS LEE: My question is for the coordinator-general. Would you be able to outline the processes that you have in place to ensure your oversight function and reporting—which directorates you are working with, the processes in place, what powers you have? How is your performance measured in terms of accountability, and that type of thing?

Mr Engele: As the coordinator-general, I do not have any formal regulatory or legislative powers. It is about bringing the key delivery agencies together, in order to ensure that all of the programs are being delivered, are on track and are taking into account other programs that are being delivered in parallel.

There is a range of governance arrangements in place. They start with the climate action subcommittee, where we do a three-monthly report to government on progress. There is a publicly released report that is released once a year by the minister for emissions reduction, which covers all of those projects.

Below that, there is a subcommittee of the Strategic Board, which comprises all of the directors-general with key responsibilities in this space. We meet once a month with them and provide information to them. Normally, things that are going to the climate action subcommittee will go through that group, to make sure that there are no issues that have come up. My function is to make sure that those forums run adequately.

I work with senior officials across all of the different programs to highlight any policy issues, or impediments that are coming up. I have a small team of six people, but it does allow us to provide surge capability to the different projects. Where we have pieces of policy analysis that are being worked on, it allows us to join up the work that Treasury is doing to understand the cost implications and the economic analysis, along with the work of the line agencies who are also doing the work. We have that flexible approach that allows us to work across agencies.

As part of the performance, I report through to the Head of Service in relation to that. We are doing work, as well, on a review, just to confirm that we are providing value to government. That was something we decided we wanted to do after 12 months, just to make sure that, with what we are working on, and the key priorities, the directorates and ministers are finding that the work we are doing is valuable. That review commenced recently.

MS LEE: Do you have a completion date for that review, and will it be made public?

Mr Engele: It is a report to government at this stage.

MS LEE: That probably goes to the Chief Minister?

Mr Barr: When I receive it, I will consider it.

MS LEE: There has obviously been a bit of talk about the next challenge in terms of reducing our emissions is in transport and gas. Coordinator-General, where are your concerns in terms of the challenges, in terms of us meeting our targets for 2025 and 2030, and what impact has COVID and the pandemic had on our ability to meet those targets?

Mr Engele: Those targets are ambitious, and they require key changes in technological take-up, particularly around electric vehicles. You mentioned the use of gas. Work has been underway with Evo to understand what implications the government's 2045 target, which is the key focus, will have on the gas network. There has been modelling work underway by Evoenergy and EPSDD to understand the implications of that, and the implications for electrical upgrades and the electricity network, to better understand the cost to consumers and the cost to the government.

In terms of other streams, we look at the direct emissions by the ACT government, and there is also a government target around that. It is about working with the zero emissions government team in EPSDD to understand the program of work, and to identify the lowest cost options for government and the pathway to switch out of particularly gas-burning assets, as well as the bus network, which is being led by TCCS, in terms of transitioning to electric buses.

My colleague from EPSDD may be able to talk about the achievement of the interim targets.

Mr Rutledge: I acknowledge the privilege statement. As the coordinator-general said, the interim targets are ambitious targets, and we are working to plot through a series

of pathways across the sectors to get there, as we said we would do in the Climate Change Strategy.

As you have already flagged, Ms Lee, transport is a big one, and private transport is a key focus of that. With respect to your question about how COVID has affected it, it has been a really interesting one. COVID has an interesting effect on the way we travel around. As has been widely acknowledged, there has been a drop-off on public transport. But there has also been a drop-off in transport around the city, as many people are working from home. Then when people are returning to school and the office, they have not instantly returned to public transport. Minister Steel and the team at TCCS are looking at that element.

Mr Engele went into some detail about the work that is progressing in the gas space. There are other smaller amounts around waste and in agriculture; but they are smaller amounts. As Mr Engele said in answer to the previous question, the annual report by the minister for emissions reduction, which we can talk further about in the next part of the hearing, is really that snapshot—it is publicly available, and independently looked at—about how we are tracking, with a focus on 2045. But those interim steps, informed by the Climate Change Council, are good steps and good benchmarks for us to check how we are progressing regarding that 2045 target.

THE CHAIR: Chief Minister, can you provide an update on the Big Canberra Battery?

Mr Barr: As I think we have touched on earlier, there are three streams within the battery project: batteries greater than 10 megawatts, which is the sort of transmission level; smaller batteries of 10 kilowatts to 500 kilowatts, on government sites and community sites; and smaller neighbourhood-scale ones between around 100 kilowatts and five megawatts. We had a call for expressions of interest for the first stream of batteries and that was introduced in December. The EOI period closed earlier last month and officials are now in the process of short-listing those proposals. Mr Engele can provide some further information in relation to the other streams.

Mr Engele: In relation to the stream ones, the transmission scale in that EOI, the next step is that, once the EOI has been assessed, we will narrow down the number of candidates and then we will go to the request for proposals. There was quite a large interest in that EOI. We got 18 proposals, which is quite large. We got quite a lot of interest on the tender site in relation to questions for the other streams. For the stream putting batteries onto government facilities, we are expecting an RFP to go out in the next two months, which will have identified those facilities and the capacities that we will be looking for on those sites.

In relation to the neighbourhood-scale batteries, that is more policy work that is looking at potential sites and areas for connection into the distribution network. It is looking at the commercial models for those neighbourhood batteries. There are a range of regulatory requirements that need to be considered in relation to how it interacts with ActewAGL and Evoenergy and also to understand how it would relate to rooftop solar and tariff rates. That work is still underway for that stream.

THE CHAIR: How will the Big Canberra Battery support the ACT's energy

security?

Mr Barr: In a number of different ways. I might get Mr Engele to go through those.

Mr Engele: The battery plays a number of roles in relation to being able to absorb energy when prices are low and then to discharge it when prices are high. So it has a mediating effect in relation to the wholesale energy prices that are experienced by the regulated monopolies. In relation to the smaller-scale batteries, they provide levels of security to the grid in their ability to absorb and provide network services to the grid. The batteries have the ability to both arbitrage—which is when they buy low and sell high—energy and engage in contracts with different networks to provide these support services. That might be to stabilise the frequency and to make other adjustments. As the grids start moving out of sync, they have an ability to inject energy in a way that brings it back into sync. Frequency control, which is one of those services, has been a major revenue stream for a lot of batteries that are already established. We would expect that that would occur both on the distribution network and at the transmission scale.

MS CASTLEY: Can you talk to me about the cost for the battery? Is it likely to exceed the budget of \$100 million?

Mr Engele: We are still waiting for the tenders to come in. The EOI proposed two different financial contracts for the transmission-scale battery. They both essentially provide a minimum regular payment to the provider of the battery. The battery provider would then make payments to the territory in certain situations, and that is normally when the battery makes money. Because the revenue streams for batteries are quite variable, this regular stream of funding from the ACT allows the proponent to get commercial finance to fund the battery. Some modelling has been done on different scenarios in relation to battery costs and profitability. At this stage we do not believe that we will go over budget on that, but I say that because we have not received the tender responses yet with prices. That will come at the next stage of the procurement.

MS CASTLEY: In relation to progress with Tenders ACT, a lot of supplementary tender documents were added. Can you tell me why that was?

Mr Engele: There were a lot of questions in relation to how those contracts would operate. Those additional documents were in relation to providing extra information about how we would see them working.

MS CASTLEY: If you are adequately staffed for this tender process, are you happy with the skill level of your staff or do you need some more assistance with that?

Mr Engele: We are definitely adequately staffed. We have a fantastic team working across both EPSDD and CMTEDD. We have contracted out specific pieces of high-end technical analysis, and those contracts should be on the register. One of those was to the ANU—the battery storage and integration project, I think it is called—to provide us with a codesign workshop. They facilitated that. Then we got Baringa Partners, which is an Australian energy consultant, to build us some modelling to give us an idea about the opportunities for the battery and the types of

financial models. We also have external legal counsel in relation to the contracts, because the contracts are not something that we would normally do in the ACT. We have gone out and got energy experts for that. We are bringing in the right expertise for the project, but the core team has all the skills that we need to continue to drive that.

MS CLAY: Are you requiring end-of-life battery recycling under those contracts?

Mr Engle: As part of the EOI we ask for remediation options. I have not seen the responses because I am not part of the assessment panel. That has been undertaken separately from the delegate, so I do not know what is in those responses. The feedback I have had is that there are some innovative responses, but that is all I have heard thus far. We did require a site remediation plan and also other opportunities to recycle the key elements within the batteries.

MS CLAY: Remediation is not the same as the recycling of the batteries.

Mr Engle: I recognise that. We did ask for sustainability and remediation options. Apparently, we have some innovative solutions, but I do not know what they are; sorry.

MS CLAY: Chief Minister, I was wondering whether you have done an analysis across the budget of dollars spent per tonne of carbon avoided or reduced and whether you might be doing that kind of thing. It would really help us benchmark all these different programs against one another, and it might be a tool that you could use in our non-climate areas to see whether we are accidentally spending money that is increasing emissions in other areas.

Mr Barr: There would be data on emission reductions at a territory level. Whether we have fine enough data to be able to attribute it to every dollar spent in the budget might be more challenging. Let me see what level of data we have where we may be able to construct something that would answer the first part of your question. I guess the second part really goes to what price you put on carbon in terms of future policy decisions.

MS CLAY: I would be interested in hearing your thoughts or seeing the analysis that is done. I have seen other governments do it and it is a tool—

Mr Barr: There are certainly some working models but they are, again, only as good as the quality of data that is fed into the model.

MS CLAY: Absolutely. Is that a question you have taken on notice? Is that some analysis that is available?

Mr Barr: I will see whether there is anything available. If there is not, then it is a question that we would consider as to whether we would need to commission a piece of work and what that would cost. There are a range of issues to consider. I take the point you are raising. I do not have an in-principle objection to that. I just need to know the cost-benefit if we do not already have a level of data that would enable where I think you are going with it. We have got some data, but I could not say at the

moment that we could drive every single investment decision of government on every dollar spent in the budget through the lens of its emissions reduction outcomes. I do not think we could accurately report that.

MS CLAY: I would welcome whatever you come back with, Chief Minister, and I will look at it with interest. I am glad I am so predictable in where I am going with my line of questions; I like to be consistent.

MS CASTLEY: We were talking earlier with the coordinator-general about climate action. Have you or your team identified any gaps in our approach for the territory, what those are, and how you would address them?

Mr Engele: Just to clarify: when you say “gaps in approach”—

MS CASTLEY: We have the battery and the household scheme. Are there other areas that you are looking to expand into?

Mr Engele: At this stage the parliamentary agreement has quite a significant number of measures in there. The key one that has not been mentioned is the vulnerable households scheme, which is a program that is being delivered between EPSDD, CMTEDD and Housing ACT. That has funding in there, \$50 million, for low income households and public housing upgrades. That is probably the other one that I have not mentioned during this session that is important to raise, because that goes to the key issues of energy poverty for a number of households. There are no measures that we have got on a list that we would be putting forward.

There is quite a comprehensive list of things that still need to be delivered across the term and we are really focused on delivering those. The one that is ramping up at the moment is this year we are looking at doing checks on public housing to see the condition reports so we can understand the upgrade requirements in relation to insulation. We are also looking at the gas-burning assets on those sites. That is an important piece of work that you will hear more about, no doubt, as the program continues on over the next few years.

MS LEE: Earlier in your answer, Coordinator-General, you referred to the take-up of EVs being a factor in reducing our emissions in transport. What work is being done to upgrade the grid to ensure capacity? Where are we up to with that?

Mr Engele: There are a few elements to that, Ms Lee. There is the public charging procurement process, which is going on at the moment, which is about having charging infrastructure that is available in convenient locations throughout the day. We know that, particularly in the summer, the level of electricity demand falls during the middle of the day, so making sure that there is an ability for electric vehicles to charge then is quite useful. In terms of the broader network question, Evoenergy, as part of their modelling work going out to 2045, have been looking at electric vehicles—and that is included in that model—to understand what the upgrade requirements would be to the grid. Work has been underway also within EPSDD to understand those requirements.

There is still development occurring in the EV charging technology as it is coming out

in relation to a few different elements. One is bidirectional charging, so the ability for your house to charge your car or vice versa, for your car to charge your house. Those chargers have only recently been approved for sale in Australia. They will provide a support to the grid because they will allow you to discharge off your car at peak time. That will actually support the grid and have lower upgrade requirements in relation to peak load.

The other thing is that with a lot of smart chargers coming out now, whilst you might plug them in when you get home at 6 o'clock, they will not start charging until later in the evening or early morning when electricity demand is lower. Also, when people are on time-of-use charges, they are disincentivised to use electricity during peak periods because they get cheaper prices in off-peak, which is what some energy companies provide. That also gives people an incentive to set the timer for their charging to off-peak periods. I think a combination of those things will mean that the impact is not severe. Mr Rutledge might want to talk about the procurement process for the 50 EV chargers and the REV project.

Mr Rutledge: I think there is this oft-cited concern about the grid. Due to a number of the technologies that Mr Engele has just gone through, I do not think that the grid is going to be the issue. The uptake of vehicles right now is really access to vehicles. I think there is a willingness of Canberrans and many Australians to take on an electric vehicle and I think access to vehicles remains the first barrier. The second barrier is the cost of electric vehicles, that sticker price up-front. The government has programs with SHS to provide a loan component for that. I think that, as more EVs come on-line, the grid will react and respond to that, in the same way that the grid has responded to the large amount of solar that has been put across our city. Grid stability due to EVs is not a real concern. It will see an increase in electricity use, but we are also seeing an increase in electricity generation by solar PV; so that is interesting.

We are currently looking at how we might help to produce 50 chargers, publicly accessible charging infrastructure, in line with the parliamentary and governing agreement. There is good interest in that. We are still deep in the first round of procurement, so I cannot talk about the outcomes. Like Mr Engele said earlier, with the Big Battery, I am the delegate, so I have not seen the proposals. But I can assure the committee that there is good interest by providers. Access to land will probably be more difficult than access to grid for publicly accessible chargers.

I think we will see new products become available where retailers will package up solar, solar hot water, battery, electricity retail and the car. New products will become available to the market that actually package that all up. I think that what we are seeing in the transport market is different technologies in the kit, different technologies in the product being offered, and a number of different companies entering into the market. You could imagine electricity retailers selling vehicles. You could imagine that happening in the near future, as part of a package, a subscription service, in effect, where you would sign up to a full package. I think that is quite interesting.

Bidirectional charging has been a difficult one for Australia as a nation. Bidirectional charging, as Mr Engele said, is where sometimes you run your car off your house and your house off your car. We have had a recent breakthrough in that we now have an

Australian standard for bidirectional charging. That has happened only in the last month. With that new technology coming on board, the ACT government has partnered with other parties, including Evoenergy, to monitor how that could work. More and more vehicles will come on-line that have that option.

It is not that you want to make predictions on this, but I think bidirectional charging could probably cannibalise the home battery market. Because the car battery is about four times the size of your normal house battery, in a few years time, if you have bidirectional charging, that will be a good supplement for people with PV. Therefore, the effect on the grid will be absolutely minimal. There is a lot going on and a lot of moving parts. To end where you started, Ms Lee, I do not think that the grid is the challenge that some people might point to.

MS LEE: You mentioned earlier, Mr Rutledge, that any extra demand on the grid from EVs would probably be offset by new electricity generation. Do you have modelling about that in terms of where we, as a community, want to go with EV uptake, obviously; and also, as part of the modelling, have you considered what happens with multi-level dwellings and charging infrastructure in those high rises, if you like?

Mr Rutledge: Modelling is available, and it is only as good as the modelling that you can have. With access to vehicles and those new technologies, that modelling is quite difficult to get. What we would say is that population growth will have more effect on the electricity grid than EVs. We have got some modelling. As I say, it is as good as we can get. I am always a little nervous about that, because the technology is changing so quickly. We are all very interested in when price parity will come on the sticker price of a vehicle. If you asked me three months ago would petrol be \$2.15 a litre, I probably would have said no, and right about now it is looking quite realistic. That might push people from an ICE vehicle to an EV much quicker than others.

Regarding the second part of your question, multi-units are a bit of a unique challenge. The government, in the last term of government, took away a lot of the unit title restrictions to make it easier for people to install their own connections for EV charging. The government is still considering how best to do that to facilitate EV in multi-units. Again, it is a challenge. You can imagine a point where everyone will want a charger by their car park. Where I think the market is at right now is that, because EVs are new, when people get an EV they want a high-end charger and they probably overinvest and overestimate their reliance on the charging. We have seen that within our own fleet. I think that, once we normalise this, trickle charging will become the norm; but I think we have a little bit of disruption to work through over the next few years.

THE CHAIR: Mr Rutledge, when you talked about bidirectional charging and how it has been recently regulated and is available now, are there other technologies that we need to be thinking about exploring or regulating in relation to EVs?

Mr Rutledge: In relation to the way in which EVs will be integrated in multi-units and the way in which we set our electrical standards, say, in a mixed-use dwelling, currently our electrical standards assume everyone is going to turn on every appliance at once, so you build to that. I think that with the onset of smart devices and smart

charging, be that in the home or in vehicles, we will be able to moderate that and bring that standard down so that we are not building for everything to be on at once; we are building for the devices to talk to each other and moderate that demand.

It is easy to think at a household level, but if you think of a multi-unit, it is just 80 households in one building. As soon as we know more about that and our devices start talking to each other, that is where we can sort of not go off the grid, but the impact on the grid will be much less. Again, I think that is probably between now and 2030. At the moment we are trying to get people to think about it. We all know about off-peak hot water. If you have got solar, we encourage people to use electricity during the day. But they are still pretty manual and there is going to be a point when our smart dishwasher will turn on only when it is right, our car will charge only when it is right and our dryer will go on only when it is right. Your house will work itself out, if you will.

MS CLAY: Chief Minister, the Commissioner for Sustainability and the Environment has listed one of her recommendations: “budget appropriation for climate change mitigation and adaptation policies will be significant, cannot be postponed and must be consistent”. I understand CMTEDD has responded to that recommendation. Can you talk me through the response to that?

Mr Barr: Certainly that is an important area of investment across a number of asset classes that the territory owns. It will be necessary to both reflect a changing climate and also the age and design of infrastructure that probably was not built with current emerging climatic events in mind. There is both a question of new infrastructure standards and a question of repair and maintenance and, indeed, replacement of some infrastructure to reflect a different circumstance. That is at a high level.

The question of what level of appropriation will be possible remains to be seen, based upon the territory’s fiscal position and other competing priorities. The point is acknowledged that an ever-increasing proportion of the territory’s infrastructure funds will need to go to replacement, renewal and adaptation, as opposed to new build. That is pretty clear in a now two-decade long planning framework and approach that talks more about urban consolidation than urban sprawl, which is in part about utilisation of existing infrastructure; but it also means that money is freed up to renew ageing infrastructure and, I guess, futureproof it against a changing climate. They are all factors to contemplate. I will ask Mr Engele if he wants to add anything more specific. This is not something that is resolved in one budget, in one parliamentary term. I suspect it will be an ongoing issue for the territory for the rest of time.

Mr Engele: The only thing I would add is that there is work underway across the commonwealth and states and territories on climate-related financial disclosures, which is to understand the public reporting requirement for those risks as it relates to assets and state and commonwealth government budgets. That work is still being undertaken.

Mr Barr: Just to round off my comments, I would observe that, regardless of climate change, some of the territory’s infrastructure is reaching end of life; it is more than 100 years old. I think there was always going to be a need to make a switch from ever-expanding outwards to focusing on the renewal, replacement and adaptation of

the infrastructure that we have now. That balance has been shifting for some time. It goes to a more substantive discussion that we had with the public accounts committee this morning about ensuring that there is a revenue base, and a sustainable one, with which to make this transition. But it is a long-term proposition and, as I say, it is not resolved in any one budget, parliamentary term or even a decade. I think this will be an ongoing challenge, really, into the foreseeable future and beyond.

MS CLAY: I absolutely agree with you. Did we get the government response to that recommendation? Has that been publicly listed? We could not find it where most of the government responses were publicly listed.

Mr Barr: I will track that down for you. There certainly is work underway in that regard.

MS CLAY: Thank you.

THE CHAIR: On behalf of the ECCB committee, thank you, Chief Minister and officials, for your attendance today. You will be sent a draft copy by Hansard for correction of minor errors. If you took questions on notice, can you please report back to the committee secretary within five days?

Mr Barr: Thank you.

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, Sustainability and the Built Environment

Walker, Mr Ian, Executive Group Manager and Conservator of Flora and Fauna, Environment, Water and Emissions Reduction

Harding, Mr Daniel, Executive Branch Manager, Climate Change and Energy Policy

THE CHAIR: We will commence the second session of today's ECCB committee hearing. I welcome Minister Rattenbury, the Minister for Water, Energy and Emissions Reduction, and officials to the committee. Please be clear about questions taken on notice. I understand that you have all been forwarded a copy of the privilege statement. Can you each confirm for the record that you understand the privilege implications?

Mr Rattenbury: From my point of view, yes. All of the officials have definitely been to estimates and annual reports hearings before.

THE CHAIR: Excellent. We are not inviting opening statements, so we will proceed with questions. Minister, is there more that can be done to position the ACT as a leader in collaboration between businesses, industry and government for research and innovation in renewable energies?

Mr Rattenbury: Yes, undoubtedly, Dr Paterson. We have a good starting foundation, with the money that was generated from the reverse auctions to get us to 100 per cent renewable electricity. There was a requirement in those agreements that successful proponents would make investments in the ACT. The broad estimate is that that generated around \$500 million of investment for the ACT.

From that, we have seen a range of outcomes. A number of companies have either their global or regional headquarters in Canberra. There are now enough of those businesses in the ACT so that you can have a career here. You can work for one company, build up your skills and maybe move. We have also seen a range of other partnerships come through from the Renewable Energy Innovation Fund. I refer to the battery project at ANU and the battery test lab at CIT. A range of other strategies are already in place.

That is the context for then saying that the ACT has developed a reputation as being a bit of a hub for the renewable energy industry, and I think there is scope to build on that. We certainly want to do that when it comes to electric vehicles, and I think we can continue to do it, particularly around batteries, hydrogen research and the like.

THE CHAIR: What is being done to continue to build those relationships with businesses that did enter into the ACT market, to ensure that we keep those business hubs here and grow them?

Mr Rattenbury: We do have strong day-to-day relationships, in the sense that there is constant contact—stakeholder events, discussions with government officials and the like. There are also further rounds now; we are putting out new rounds of reverse auctions to secure increased renewable electricity supply for the future. There are new projects coming through. The Renewable Energy Innovation Fund continues to operate, to disburse funds, and to take applications to do that. There are a range of initiatives. I am looking at the officials to see whether there is anything I have forgotten.

Mr Rutledge: Further to what the minister was saying, we have not only seen a number of companies come to the ACT—Neoen being a primary example—but also new companies have been set up. Windlab has come to the ACT, and CWP. ITP is expanding their business here in the ACT.

It is difficult to overestimate just how that talent attraction really supports our city. With respect to the relatively small amount of partnership investment in the ANU in that battery storage integration program, if you go there now you will see 40 PhD students. Those students would not be here if it were not for that small investment that we made and for the smart people that the ANU have employed in that. Those 40 PhDs will probably stay here for a while and they will look for work here. It is about how this seed funding that we have taken from the REIF and put into the community has spurred those next ones.

As the minister said, the idea with the REIF was always to be just in front of the curve, and the REIF has proven to have done that. Now we are looking again to say, “How can we remain just in front of the curve, and what is the next wave?” As the minister said, EVs are probably the next one. Now we will be looking at how we can integrate EVs into our way of life as a community, into our technology and the technologies that it brings forward, and create an electric vehicle or a zero emission vehicle—not just electric vehicles—ecosystem, so that we become an attractor for experts in that. Maybe in a few years time we will see 40 PhDs in EV integration. Who knows? It is an exciting time to be in this space, and the REIF has proven its worth on any measure—on talent attraction and on economic development. It is really getting those jobs here in the ACT.

MS CLAY: Minister, in May we announced new incentives for EVs. We have a bit of a package, with free rego, the sustainable household loan scheme and some charging infrastructure rolling out. Can you tell me how that is tracking and how you are measuring success there?

Mr Rattenbury: Yes. There are probably two measures. One is anecdotal. People are very positively chatting about how the interest-free loans or the various other incentives are helping them to close the sticker price gap, if you like. They are motivated; they are seeing the ACT government encouraging them and they are taking that encouragement.

Probably the more meaningful indicator is the sheer increase in the number of EVs in the ACT. I have some figures that I can give you. In the middle of January 2020 there were 446 battery EVs registered in the ACT. As of 28 February 2022, two years later,

that number has risen to 1,729—essentially, a fourfold increase in that period. That particularly accelerated from, as you flagged, May 2021, when we brought in the stamp duty concessions and the free registration. Those financial incentives have made a big impact.

What is interesting with the Sustainable Household Scheme is that, because you can get a loan for up to \$15,000, and we included second-hand EVs, you can get a second-hand EV in the \$18,000 to \$20,000 price range. A lot of people have seen that they are able to cover most of the cost of a vehicle. I think it has been particularly important that we include second-hand EVs in these schemes.

MS CLAY: In those numbers you have given us, 1,729 EVs, is that the private fleet or does that include the government fleet as well?

Mr Rattenbury: That would be all vehicles. I can give you a specific breakdown of the government fleet. As you know, we have a specific policy in that space. There are now 180 zero emission vehicles in the ACT government fleet. That also includes the 20 hydrogen fuel cell vehicles that we have as part of that fleet.

MS CLAY: We did hear from the Chief Minister in the last session about the number of EVs bought under the Sustainable Household Scheme, and it was a bit lower than I expected, actually. We have a much higher uptake of solar panels, which people are very familiar with, of course, and we had quite a low uptake of EVs. Do you think that is likely to shift, and are you hearing about barriers to EV uptake?

Mr Rattenbury: The important context there is that EVs were only added to the Sustainable Household Scheme in December—that is, about 2½ or three months ago—whereas solar panels were there right from the start. There is probably a little bit of a lag in people realising that it is available.

The other issue we have is the availability of vehicles—the limited number of models available in Australia, as well as the actual availability of vehicles. There is a wait of anywhere between a month or two and up to six months, depending on which vehicle you are after, for getting EVs into Australia. Frankly, because Australia’s federal policies on EVs are so poor, the manufacturers are not prioritising bringing the vehicles to Australia.

We are getting very clear feedback from industry that there are other countries in the world that are mandating fuel standards or emission standards, and there are penalties if automakers do not meet those standards. In Australia it is a free-for-all; you can do what you like. It is only the states and territories that are doing any heavy lifting. The manufacturers are sending their vehicles to other places.

MS CLAY: We have heard quite a lot about charging in apartment buildings. Have you done much work on barriers to assist people to charge in or near apartment buildings?

Mr Rattenbury: Yes, this is a really important area. As you may recall, identified in the EV action plan were changes to the planning law. We have to implement this, but we intend to put in a mandated requirement that new buildings are built ready to take

electric vehicle charging infrastructure. Mr Rutledge mentioned in the last session that there have been changes to the body corporate rules to make it easier for people to put in sustainability measures, which I think is good for retrofitting.

It is also about having public charging infrastructure. The experience that we are picking up from overseas is that people who live in apartments much more predominantly use the public charging infrastructure. If they live in an apartment, often they only need to charge their vehicle once a week; so on Saturday morning they will go for a coffee, take their car, put it in the charging station, have their coffee and charge the car while they are down there. That is how many people in overseas jurisdictions are overcoming not having the direct infrastructure in their own buildings.

The electric vehicle charging outlook, which was released in December, very much takes that experience and that learning from overseas into account, in terms of where we have prioritised the rollout of public charging stations.

Mr Rutledge: We touched on this in the last hearing, in response to an answer to Ms Lee. Drawing the attention of the committee to that EV charging outlook, in order to develop that we mapped the demographics of the city, the presence of multi-units and where access to public charging is required; we really mapped out, between now and 2030, where we think publicly available charging infrastructure should be. There are some economics, some demographic and some planning overlays. It shows where we know there will be a demand for publicly available charging infrastructure right out to the 2030s.

As I said in the last hearing, the government has committed to getting the first 50 up and running. We know that a lot is happening at the private residential level and in the multi-units through initiatives of existing owners. We see that by 2030 we will need 600 in the publicly available charging infrastructure. As you know, and as the minister said, even if you have a car spot, you might be living in a multi-unit where you have two cars but only one car spot, you might be visiting the city, or you might be a tourist. There are lots of areas where we need to provide that as a city, and the industry needs to provide that. It is not solely for the government to provide it.

By producing this outlook we have done enough of the thinking beforehand so that industry can have confidence in investing in this city, confidence in investing in charging infrastructure, knowing how to get a grid connection, knowing where we think the uptake will be, and then they can make their own decision. If you are a coffee shop, you might think about installing it, if you are in one of those priority areas. Anecdotally, hotels are saying that people are ringing up, booking a room and saying, "Have you got charging infrastructure?" That is part of the booking process. Again, if they are not available in those places, then we will not be able to cater to those visitors.

There is a fair bit of modelling in that, around where we think we are. Further to the minister's answer, we have already seen the uptake in response to the incentives put in place by this government, but what I find really interesting is what happens when price parity exists. If you are in that market—and there are people in this city in that market that are already going to spend \$60,000 to \$80,000 on a vehicle—20 per cent of those vehicles are electric already. Once you are in that higher end market, 20 per

cent are already buying electric vehicles. That gives you some confidence that if the price reduces, with the existing incentives in place and the barriers off accessing vehicles, we can still expect Canberrans to eagerly take up at least the first 20 per cent. That is what we are seeing in those early numbers.

MS LEE: With the REVS project, Minister, are you able to give us an update about where that is up to, including how we are going with the acquisition of the Nissan Leafs?

Mr Rattenbury: Yes. I will defer to Mr Harding for the details on that one.

Mr Rutledge: Minister, I will kick off. With the REVS project, as I mentioned in the previous hearing, getting bidirectional charging through an Australian standard has literally only happened in the last month. We have not wasted our time. We have the 50 Leafs on board. We have the charge points. We actually installed single directional chargers in the interim, so that we could get the vehicles into the fleet and people using it. The next step now is to swap out the single directional charges to those bidirectional chargers, and that is when the knowledge will flow. We are trying to learn about the impact on the grid of bidirectional chargers, or bidirectional electric vehicles, as they roll out across the city.

What is interesting about this project is that it is hooked in with the ANU—the very clever people at the battery storage integration program. Those people will be there. Evoenergy is already on board; we are on board; Nissan is on board. We will be studying the impact on the grid, and we do two things. We will be releasing that data publicly, but, more importantly, we will be releasing that analysis publicly. Again, this will provide a steer as to what will become a nationwide opportunity for how to integrate bidirectional charges at a grid effect. A household effect is a different one; this is at a grid effect.

There is charging infrastructure installed across community health centres. Canberra Health Services community health centres have about 35 of the Nissan Leafs. The other 15 Leafs are dotted around the other directorates. It will have different settings. One of the challenges we have had is with some of those older community health centres—and these are the implementation challenges you have when you are starting something innovative. If you go along to the 1970s Dickson health centre and look at when the last electrical specs were drawn up, it was not in the 1970s, thankfully, but it may have been shortly after that. You really need to go along an electrical journey to get a transport outcome. Those are the learnings that we will be feeding out, and we will be telling that story to other people, other fleet managers, and our academic friends at the ANU will be telling that story to the academic community, and the distribution community, to ensure that we harness maximum information out of what is a relatively small project but one that is very innovative—the first in Australia.

MS LEE: You mentioned that you were going to make those findings public. Have you got a time frame?

Mr Rutledge: Ms Lee, if we had Australian standards in place, we would probably have early results now. It will be through milestone reporting and an open dialogue. The benefit from this program will come from talking about it. Once we have

anything meaningful, you will be hearing from us; you will be hearing from the team at the ANU, from Evoenergy and others. All of the partners involved in this are very keen to make this project work.

The other element is that because ARENA, under the federal government, is a funding partner, they also have requirements under our funding deeds to report to them. They have a very accessible website that will be talking up those early results. We are trying to outline the key audiences that need to hear the different elements of this. You will probably be sick of us talking about it, we will be talking about it so much.

MS CASTLEY: My questions are around the minimum energy performance on rental properties. In the listening report, we read that landlords, if minimum standards were introduced, would do one of three things—make changes, increase rent and pass on the full cost to tenants, remove their properties from the market—or they would simply take no action at all. What options are you considering to incentivise rental providers to improve the energy efficiency of their properties, or to penalise those who do not comply, as part of the reform?

Mr Rattenbury: It is a good question, and that is the exact work we are doing at the moment. Having gone through that round of public consultation, the directorate is now analysing that feedback. The intent is to mandate the minimum energy performance standards. So there will be a requirement. Our thinking is that we will have a transition period—a number of years, and that number is not finalised yet—so that there is time for landlords to prepare and get organised and also to make sure that there are sufficient tradespeople available to do the work in an orderly, distributed kind of way; not to create a bubble, but to do it over a sustained program.

We are also looking at what financial incentives might be provided through the various government mechanisms to assist landlords to make those changes. We need to keep in mind, of course, that these kinds of upgrades are tax deductible for landlords. The government needs to think carefully about finding the right balance to make sure that it is not an impost that is impossible for landlords to overcome but at the same time is not unnecessarily generous. Finding that sweet spot is the work that we now need to finalise in light of both the regulatory impact statement and the feedback.

MS CASTLEY: Have you done additional modelling to understand how it will affect the market?

Mr Rattenbury: Affect the market in what way?

MS CASTLEY: The property market for investors coming to Canberra.

Mr Rattenbury: In terms of investors coming to Canberra, we have not done specific modelling on that. To be honest, there are a range of views. This is a contested space. There are those who believe that this will be problematic. That said, we continue to see a strong level of investment in Canberra. For many people, Canberra remains a highly attractive market. I think there will be mixed opinions on the likely impact.

MS CASTLEY: Has there been a regulatory impact statement done? Is it completed

yet? I think we were expecting that in the second half of last year.

Mr Rattenbury: Yes.

Mr Rutledge: It is published on the YourSay website. We made that available as part of the public consultation on the regulatory impact statement.

MS CASTLEY: Can you give us a time frame on when we can expect to see the draft legislation for this?

Mr Rattenbury: This year.

MS CASTLEY: This year.

Mr Rattenbury: I would like to say sooner rather than later, but we are right in the middle of analysing all that public feedback now.

MS LEE: Minister, in your response to Ms Castley, you seemed to dismiss some of the concerns that have been raised. This is from your own listening report on what the landlords may do in terms of taking steps, and you have said that of course you are going to mandate this. What concern do you have that this is going to mean that landlords take their properties off the market, pass on the full cost or take no action at all? What is going to be the consequence of that?

Mr Rattenbury: I certainly do not believe I did dismiss those concerns. I indicated that we are analysing all of that feedback at the moment and thinking about the final design of the scheme in order to take account of those concerns but, at the same time, be mindful of the objective here, which is to ensure that we have properties that are more energy efficient in our city, to ensure that tenants are living in houses that are properly insulated and have lower energy costs and better health outcomes, and to minimise our energy requirements as a city going forward. We have to balance the concerns with the very clear objectives, which have important social, economic and environmental goals.

MS LEE: Can you confirm that, as part of the factors that you will need to consider in moving forward, it will also include the affordability of housing for tenants?

Mr Rattenbury: Yes, of course. I talked about the economic considerations.

MS LEE: I have some questions on work that the government might be undertaking in relation to recycling. Obviously there is a huge incentive to take up solar panels, but also batteries as well. What work is being done, or what investment is the government making, on any research when it comes to making sure that we are investing in recycling technology?

Mr Rattenbury: This is a very important consideration. Minister Steel has lead responsibility for waste and recycling issues. You may recall that Ms Clay had a motion in the Assembly just a couple of months ago flagging these specific issues. That specifically sits with Minister Steel and Transport Canberra and City Services.

MS LEE: Do you, as minister for emissions reduction, have any policy oversight or leadership in relation to the direction the government is going on technologies for recycling of solar panels, batteries and the like?

Mr Rattenbury: I have a strong interest, but the ministerial responsibility sits with Minister Steel.

MS LAWDER: I have some questions about water quality in our lakes and waterways. In previous hearings we have spoken about water quality monitoring data, and my recollection is that we spoke about the MUSIC model. Can you explain to me why we are using a sort of conceptual model for water quality rather than the actual results that were gathered during the first part of the Healthy Waterways project? The first two years I think was a gathering exercise. Why did we gather that data and why are we going back to a quite old MUSIC model from, I think, the 1970s? Surely there has been quite a lot of change in our climate and our waterways.

Mr Rattenbury: I will ask Mr Walker to provide you the details on that.

Mr Walker: The MUSIC model is a model that we use and it is based on data and information that we collect. It is not a static product; it is actually a product that is informed by data and information as it becomes available and can be incorporated into the model. It helps us and, I guess, builds on your point that information changes over time; information relating to climate becomes more readily available. We constantly get updated with different information. That is part of why we use models, because it gives us the best indication at a particular point in time around changes in the environment. It is a very powerful tool to help guide decision-making. As I highlighted, it really picks up on new data and new information that comes to hand to further refine and inform decision-making.

MS LAWDER: Was the data collected as part of the first two years of the Healthy Waterways project? Is that now included in the MUSIC model?

Mr Walker: The data that is collected routinely is updated and used in the MUSIC model. So, yes, that is correct.

MS LAWDER: I think I have asked for this before, but I have yet to receive it. Could you provide a copy of the MUSIC software model for the assets and the water quality data collected on the Healthy Waterways assets to the committee?

Mr Walker: That information can be provided, Ms Lawder.

MS LAWDER: Thanks. I am also interested in—and, again, my recollection is that we have discussed these in the past—the Healthy Waterways design acceptance reports and the operations and maintenance manuals that would have been passed over when the directorate accepted those infrastructure pieces. I had a question on notice, 477, about Lake Tuggeranong water quality monitoring data. I received six months worth of data. The question was actually about data from 2010 to 2020, and also now post-July 2021, excluding the algae and coliform data from 2015 to 2020. I can provide that in writing, if that helps you.

Mr Rattenbury: That might be the best approach. As I have signed them all off, I know we have provided you with large amounts of data, but I am happy to have a look at that detail and see if there is further information we can provide you.

MS LAWDER: That would be great, as you cannot manage what you do not measure.

Mr Rattenbury: Sure.

MS LAWDER: I am keen to make sure that we have all of this information, and I would like to have a look at it. Thank you for your cooperation.

Mr Rattenbury: We will provide you what we can.

MS LAWDER: Thank you.

Mr Rutledge: We have been working to provide as much information and as much data in a useable format to Ms Lawder. We certainly have been working hard on that. It has been quite challenging for us, and we continue in that dialogue, but rest assured that it is not from a lack of will on behalf of the minister or his officials. It is just that translating it and making it dispatchable has proven to be a challenge. But we will continue that dialogue.

MS LAWDER: Thank you very much.

Mr Rattenbury: It is actually quite resource intensive to extract some of this data.

MS LAWDER: At least, apparently, you have the data, which is a good start.

THE CHAIR: Minister, are you collaborating with the Minister for Business and Better Regulation regarding ongoing local business support through various energy efficiency programs and cost savings to be achieved, particularly in the wake of COVID-19?

Mr Rattenbury: In the broad sense, yes. We have a range of supports available to local business. Certainly, the Actsmart team have worked very diligently, over a number of years now, to make themselves available to businesses across the city. We have an annual awards program that recognises those businesses that have got involved, so we try to deliver that. I think, to be honest, during some of the lockdown periods the rollout of those programs slowed quite a lot; businesses were, frankly, focused on other things. As the opportunity arises to get back out there, we will seek to ramp those up again. The team remained available to do online sessions during the lockdown but, as I say, a lot of businesses just were not engaged; they had bigger problems.

THE CHAIR: Where do you see the challenges for businesses becoming more energy efficient in the ACT?

Mr Rattenbury: I think the biggest challenge for businesses, and particularly small businesses, is finding the time to sit down and think about it and to just do the research and feel confident that they are making a wise investment. The reality is that,

when it comes to things like energy efficiency, it is probably the best thing they can spend their capital on in terms of rate of return, because the payback period is usually between three and five years, whether it is solar panels or various efficiency measures. It is a great rate of return on their capital. But, because it is not their core business, they often lack the confidence or they feel that the sales person that comes to see them is just trying to sell them a product not necessarily for their benefit but for the business's benefit or the salesperson's benefit. A lot of the government work in recent years has been about trying to overcome both that lack of time and that lack of confidence, or sense of expertise, and to be a bit of an honest broker in this space, if you like, to help businesses feel like they are making the right choice.

MS CLAY: Minister, we have a number of items in the parliamentary and governing agreement about getting off gas. We have a commitment that we have no new gas mains network connections to future infill by 2023. ACT government buildings and facilities will be fossil fuel gas free. It is all part of a transition off gas plan. Are we on track to deliver that and have we got a full transition off gas plan?

Mr Rattenbury: There are quite a few elements to that. In the macro sense, the government has undertaken to have a gas transition plan by 2024, so we are a little way off the deadline on that one. We actually hoped to and expected to deliver that gas transition plan earlier than that. There is a large amount of research and policy work going at the moment, including working closely with Evoenergy, as the gas network provider, sharing modelling, background information and the like to help government think that through carefully. On the big picture strategy, that is the time line for that piece of work. On the specifics, so things like the mandate to stop the future rollout of the gas network, each of those pieces of policy work is on track. They are in various stages of development at the moment.

MS CLAY: That is good news indeed. Is this likely to have any ongoing impact on our energy stability, our grid stability, as we transition off gas?

Mr Rattenbury: We certainly need to be very mindful of that. I heard Mr Rutledge, at the end of the last session, talking about the fact that population growth is going to be a bigger impact on our electricity grid than many of these other things. We need to be very mindful of that. That will involve a range of responses. Firstly, we will be increasing the supply of electricity for the ACT, purchasing more renewable supplies. Secondly, we will be thinking very carefully about energy efficiency, because it is the cheapest way to manage energy demand. Thirdly, we will be thinking about the future of the grid, including how we use batteries across the city to stabilise the grid. That sits with the project the Chief Minister is leading on the Big Canberra Battery, where we think those batteries can play a very important part of reinforcing or strengthening the grid across the city.

MS CASTLEY: I have some questions around the Energy Efficiency Improvement Scheme. FOI documents have stated that the administrator of the scheme has decided to request an audit of ActewAGL's pricing for delivery. Is this finished and can you give me some detail about that?

Mr Rattenbury: I will invite probably Mr Rutledge to just give you some details on that.

Mr Rutledge: I will probably take this question on notice, but to give you a sense of where we are headed, in the EEIS the government regulates a retailer to provide energy improvement upgrades with a focus on residents and a focus on what we call priority households—they are normally more vulnerable Canberrans or lower income Canberrans. Then we do an annual report and the EEIS administrator report is attached to the back of the annual report, which adds to that.

Quite regularly, or routinely, we wish to make sure that Evoenergy is delivering, as our major delivery partner, both value for money under the scheme and value for money for the consumers. An audit probably makes it sound worse than it is. I would probably describe it as a health check rather than an audit. We will see that health check come back in about May of this calendar year. If anything is awry in that health check, we will see what we need to do and work with the retailer on that.

Following Minister Rattenbury's comments on that last question, energy efficiency is the cheapest and easiest way of reducing the need for energy and generation. The EEIS has proven to be a very efficacious scheme, and it is very well supported by the community itself. We have moved the products available under that scheme in response to the changing needs of the community. I think it remains a great scheme. We will see how the health check comes out, but there was not an element of concern; it was more a health check as a result of wanting good governance and good accountability for the work that retail is doing on behalf of the government.

MS CASTLEY: EPSDD provided advice to the minister, as we found through the FOI, that it is unlikely the ACT would be able to generate the level of competition required to support a certificate-based energy efficiency scheme. Has the directorate done any market analysis or modelling to support that advice?

Mr Rutledge: The analysis that led to that advice? We have had a single extremely strong retailer in the ACT for a very long time, and that might be a risk. But when I look at, say, the retail markets of the Gold Coast or Victoria, a lot of consumers get bedazzled by the number of offerings, the number of retailers and the number of packages. I think that our strong retailer in Canberra has protected our consumers from some of that. What that does mean, though, is we have a retailer that has upwards of 70 or 80 per cent of market share and, therefore, is the right home for the delivery of some of the services that we want delivered to the community. There are risks and benefits in that, but I do not think there is any reason to suggest that the market has changed much since that advice was provided.

MS CASTLEY: So you have not done modelling and provided that advice?

Mr Rutledge: Not additional modelling, no. It is a fact that we have a single, almost monopoly, provider of retail electricity. If that changed then we might be in a different space but, as I say, it has not changed sufficiently to suggest that that advice is not correct.

MS LEE: Minister, can I take you to page 55 of the annual report, where you say that the directorate worked closely with Housing ACT to deliver solar panel installations at the Common Ground project in Gungahlin and the social housing project in Kaleen.

Can you advise the committee about the energy performance of the whole of the Housing ACT stock? Do you have that info?

Mr Rattenbury: I do not. We would need to go to Housing ACT for that information. Again I will defer to the officials to check whether anybody has that information.

Mr Rutledge: The answer to that is no, we do not have that information. Housing ACT would have a better picture than us. We are working with Housing ACT, particularly with the impending rollout of the VHESS, the Vulnerable Household Energy Support Scheme. We are working closely with Housing ACT to make sure that we can target that. No, we do not have that information here, but we continue to work with Housing ACT to improve our information.

MS LEE: Is there a plan to install solar panels or any other energy efficient technology across any other Housing ACT stock?

Mr Rattenbury: Absolutely, Ms Lee. The Vulnerable Household Energy Support Scheme, which Mr Rutledge was just referring to, includes Housing ACT stock. Through that program, we intend to roll out a range of measures, the details of which are not finalised yet, but that will include, for example, energy efficient hot-water systems, heating systems and potentially solar panels.

Mr Rutledge: Ms Lee, the Kaleen property was an interesting one for us. The reason we chose that Kaleen property for Housing ACT was not because we thought solar would be a rollout over Housing ACT properties more widely but because that was a multi-unit, townhouse development, and we wanted to see how we could get efficiencies or if there were efficiencies with rolling out a larger PV scheme over multi-units.

That was the purpose of that one, and we are still analysing whether or not that is a model. It certainly was not a precursor to a wide-scale rollout of solar panels on public housing stock. Our focus in public housing, as the minister said, is on hot water, energy efficiency through insulation to meet future standards, and swapping people off gas heating to reverse-cycle air conditioning. They have been our focus in upgrades with Housing ACT.

MS LAWDER: Minister Rattenbury, at the last budget hearings Mr Walker talked about a draft lakes and ponds plan. I think that was released in the last week or two. Would questions for that be best addressed to Minister Gentleman or to you?

Mr Rattenbury: Yes, that is right; that plan sits with Minister Gentleman.

MS LAWDER: It is my understanding that under the Basin Plan there is supposed to be an annual water quality report. When was the most recent water quality report?

Mr Rattenbury: Mr Walker, are you able to assist with that one?

Mr Walker: Ms Lawder, in the interests of accuracy, I will take that on notice. I am pretty sure it left my desk recently, but for the purposes of getting an accurate answer for you, I will take that question on notice.

MS LAWDER: Thanks; that would be great. The most recent one that I can find publicly is from 2015. Has there been a report every year? If not, why not? If there has been, where are they publicly available? If they are not publicly available, could I get a copy of them, please?

Mr Rattenbury: They are all fair and reasonable questions and we will come back to you with the details on that.

Mr Rutledge: Ms Lawder, as the minister said, we will make that available to you. I make the observation that the ACT government, along with all of the other basin states, have the same level of reporting, yet probably less impact than some of the other basin states. We have the same administrative burden on getting our reports in on time and done, yet the impact of the ACT on the basin is not as great.

The Basin Plan reporting on the MDBA website is pretty comprehensive. I think that is where I will start. As the minister said, we will take the full set on notice and ensure that our reporting is up to date, or at least that you have access to it, and reasons why, if that is not the case. I am pretty sure that we are on track. The MDBA website is probably as inaccessible as most government websites. I will be happy if it is on there, if you have not been able to find it, we will dig it out.

THE CHAIR: My question is a follow-on about the basin. In the Water Strategy 2021 Report Card it says that the ACT government has been progressing discussions on water trading with New South Wales, the Murray-Darling Basin Authority and the Australian government. Can you detail what discussions have been progressed and how that is progressing?

Mr Walker: We have been working with New South Wales very diligently to progress water trading. It is an important element to allow water to move through the basin. We have what we call a sustainable diversion limit. Part of that diversion limit has a requirement under the Basin Plan to provide water to the environment. That is a key component that is occurring right across the basin jurisdictions. Doing so means that each jurisdiction has to have water trading ability with its neighbouring jurisdiction as water flows from one jurisdiction to the next. For us, developing that trade arrangement is a particularly important one for future water security, both across the whole basin and here in the territory.

The ACT is unique in the basin context, in that our water use is predominantly all urban and for domestic use, with very little going to the agricultural sector, which is the vast majority of water use in our larger jurisdictions. With that trading arrangement, we are working with both New South Wales and the commonwealth to pursue it for the benefit of the territory in terms of its ongoing water security.

THE CHAIR: What are the time lines on establishing that trading arrangement?

Mr Walker: The negotiations have been ongoing for a period of time. We are hopeful that within the next 12 to 18 months we will be able to have a more informed outcome around trading. One of the challenges with trading with other jurisdictions is that it requires said jurisdiction, New South Wales in our case, to go through some reform

and legislative change in their jurisdiction. Often that depends on the value and interest in doing so from those individual jurisdictions: how does that stack up in New South Wales compared to the priority that the ACT places on it and the priority that the commonwealth places on it?

MS LAWDER: Is the ACT government still looking to sell 15 gigalitres of Canberra's water?

Mr Walker: The ACT, in its commitments through the basin, has never committed to selling 15 gigs of water. It has committed to investigating 15 gigs of water and the possible efficiency gains through a range of efficiency measures. Part of the package of work that the government has been exploring is how can we save water in the territory by introducing efficiency programs, so things like improved infrastructure, improved communication and really reducing water use. That work is ongoing. We are working through a process with the commonwealth to look at how we can use those efficiency gains, so the water that we have saved, and then trade that with New South Wales and/or the commonwealth.

That work is live at the moment and does provide a very important pathway for water security in the territory. Being secure with our water, using it wisely, is one of the key steps in terms of our plans to make sure that we have water available for the future. Clearly, at the moment our dams are full, so it is not such a big issue around water security. But take your mind back a couple of years: water was less full in the dams, so it is an important feature for us to invest in and look at for the future.

MS LAWDER: How many years would it bring forward the requirement for further water security measures if the investigation of the 15 gigalitres came to pass?

Mr Walker: I think I have the answer that you are looking for, Ms Lawder. What we are talking about here, and the work that we have done, is that we have identified that we have 4.9 gigs of water that is available through efficiency measures that could be provided and secured for future use. That would be to 2040, to be factually correct. That is when that time frame for those water security, water efficiency, measures would be applied.

MS CLAY: Minister, we had a report last November from the commissioner for environment and sustainability about scope 3 emissions. We were looking forward to a whole-of-government response to that. I have been told that you are the minister coordinating that whole-of-government response. Have you made some progress on scope 3 emissions?

Mr Rattenbury: Firstly, I can confirm that I am responsible for coordinating the government response to that report, so it is always a win in these committees. The government is working on a formal response to the commissioner's report. The commissioner made 12 recommendations, I think—11 or 12—and we are working through across government coordination. I am sure you have read them. They cover a range of government areas, so I need to work with other ministers to put that response together. I think it is a really valuable report that the commissioner has given us, because it is one of the first times that anybody has really looked at scope 3 emissions, certainly in Australia. Even globally, there has not been a lot of work on this. I think it

puts the ACT in a good position to really start thinking about how to tackle scope 3 emissions.

MS CLAY: And you are obviously working with the commissioner in that response?

Mr Rattenbury: Formally it is a government coordination exercise. The commissioner has put across those recommendations and now the government agencies have to think about their response to that, but there is certainly the ability to pick up the phone and drill into what the commissioner was getting at or seek further advice. As I was touching on, scope 3 is not well understood, but the commissioner's office now is probably the best source of information around on how to deal with scope 3.

MS CLAY: What is our time line on that government response and then policy coordination following from it?

Mr Rattenbury: Formally the government response has to be done within six months of receiving the report from the commissioner; so we are getting fairly close to the deadline on that and you can expect to see that response reasonably soon. Then, basically, we have to get on with the implementation of the recommendations we have agreed to.

MS CASTLEY: Minister, you mentioned there is more work underway on new contracts for renewables, whilst of course the wholesale electricity prices shift. We have seen in the last year ACT electricity prices rising sharply and they are predicted to rise again this year. What safeguards are you putting in place for these new contract negotiations to ensure that Canberrans are protected from electricity price shock?

Mr Rattenbury: What we have seen in the last 12 months is both an unprecedented and an unexpected shift in electricity prices. If you take a longer term perspective on this, in the three years prior to that, the ACT model insulated ACT consumers against price shocks that were taking place in the national electricity markets resulting from the retirement of the Hazelwood coal-fired power station, which was shut down unexpectedly by its owners. Our contract for difference actually insulated ACT consumers against that.

With the fall in electricity prices driven by the pandemic, that went the other way. Way back in 2012 when we first modelled the move to 100 per cent renewables, the government anticipated the maximum impact for consumers would be around \$5.50 a week. Currently, even with the price increases that we have seen in the last year, we are very much in that ballpark at \$5.65 a week. I think it is fair to reflect that the ACT still has comparable electricity to any other jurisdiction in Australia whilst delivering 100 per cent renewable electricity.

MS CASTLEY: My understanding is that the protection did not offset the increase, though. It has gone up almost 12 per cent.

Mr Rattenbury: In the last 12 months, yes, but what I was referring to was prior to that we actually saw revenue being returned to the ACT. What we have seen in the last few months is electricity prices returning to what might be considered more

normal levels. I anticipate that that will flow through this year and we will see a stabilising, if not some decline, in ACT electricity prices as a result of that.

MS CASTLEY: Going back to my original question, what safeguards are you putting in place?

Mr Rattenbury: Obviously, the new contracts will be struck at a price that reflects the lower cost of renewables now compared to when those contracts were previously signed in the 2013, 2015, 2016 era. We have seen a significant reduction in the strike price for those new contracts. The contract for difference will continue to be a feature of the new contracts, which provides both security to the suppliers of electricity and those buffers for ACT consumers. I am conscious that Mr Harding is in the room. He might like to add some comments.

Mr Harding: Further to the minister's answer, we can observe historically that for all of the reverse auctions that the territory government has conducted, it has struck what were at the time record low wholesale prices for long-term contracts. That was no different in the 2020 reverse auction, where we struck prices in the forties—so between \$40 and \$50 a megawatt hour for one of our windfarm contracts—which is quite remarkable.

In relation to the concerns that you have expressed around safeguards, in the territory striking those contracts is part of an obligation with the windfarm and solar farm generators to transfer large-scale generation certificates to the territory. Those certificates are then used by the territory to acquit its 100 per cent renewable electricity target. It also materially contributes to the territory's greenhouse gas emissions reduction target.

As part of the two new contracts that were struck in 2020, the territory set a price floor in those. Recognising that in the wholesale market electricity prices can go anywhere from minus \$1,000 to \$15,000 a megawatt hour on a five-minute interval, obviously it is a very volatile commodity market. So the territory has set a price floor in those contracts to ensure that we still receive some value in the form of LGCs, but we will not pay prices to generators to generate when prices are very, very low or in negative terms.

MS CASTLEY: Will the contracts be made publicly available?

Mr Harding: Those contracts are struck by a deed of grant and those deeds of grant are all on the legislation register, I believe.

THE CHAIR: On behalf of the ECCB committee, I thank Minister Rattenbury and officials for your attendance today. You will be sent a draft of the Hansard transcript for correction of minor errors. Please report back to the secretary with any questions taken on notice within five working days. Members, you are able to lodge questions within five working days. I thank everyone for today's hearing.

The committee adjourned at 3.30 pm.