



LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL TERRITORY

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

(Reference: [Inquiry into renewable energy innovation in the ACT](#))

Members:

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

TRANSCRIPT OF EVIDENCE

CANBERRA

THURSDAY, 17 JUNE 2021

**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.

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Amended 20 May 2013

The committee met at 2.01 pm.

BARR, MR ANDREW, Chief Minister, Treasurer, Minister for Climate Action
Minister for Economic Development and Minister for Tourism

ENGELE, MR SAM, Coordinator-General, Climate Action, Policy and Cabinet
Division, Chief Minister, Treasury and Economic Development Directorate

McGLYNN, MR GENE, Executive Group Manager, Climate Change and Energy,
Environment, Planning and Sustainable Development Directorate

THE CHAIR: I declare open the second public hearing of the Standing Committee on the Environment, Climate Change and Biodiversity's inquiry into renewable energy innovation in the ACT.

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

This self-referred inquiry started on 23 February. The committee has received 21 submissions, which are all available on the website. Today we will hear first from Chief Minister Andrew Barr and then from Minister Shane Rattenbury.

Could witnesses confirm for the record that they have understood the implications of the privilege statement in front of them.

Mr Barr: Yes.

THE CHAIR: In a fair few of the submissions that we received, there was a lot of talk about community batteries. Chief Minister, would you be able to talk more about the big batteries and the potential for community battery schemes in the ACT?

Mr Barr: The Big Canberra Battery concept is a distributed network that would involve, potentially, batteries at a number of different scales, from quite large batteries located next to the interstate transmission lines through to institutional level batteries—for example, at universities or facilities such as schools and businesses—at community level, and then at household level.

It would be possible for collective community activity to be channelled into a suburban or district level battery. That is certainly possible. It would depend a bit on the level of community investor interest and the economics of the individual project, but it certainly can be part of a larger distributed battery network.

Going to the question of whether there would be public subsidy involved in that, we would need an assessment of the economics of the individual proposals. Clearly, the cost benefits are there at a larger scale; the rationale for government co-investment could be based on a social equity metric as well. Largely, the government would seek to invest on behalf of community members who would not be able to invest themselves. That would be one criterion for assessment. Making a larger investment on behalf of a section of the community is a possibility for government to consider.

At the household level, we have some schemes in place. There are a range of support measures, from interest-free loans to other mechanisms that support households who are able to make their own investment decisions.

A lot of the economic metrics have changed significantly as a result of COVID-induced policy decisions by central banks. The rate of interest at the moment is as low as it is likely to ever be, so the level of government intervention necessary to make certain investments economic is much lower now than was previously the case. In many instances, you would not need government support in order for it to be a viable investment for a household or a group of households.

That does not exclude government co-investment, but if I were to observe the situation now in terms of the cost of finance against a more normal set of economic circumstances, I would say that the cost of finance now is as low as it is ever going to be. That is also true for government. The hurdle rates for rate of return on particular investments are lower than they have been previously.

MR BRADDOCK: On community batteries, whilst I note that the economics tends to lean towards bigger batteries, there are still advantages—social and also in terms of the grid and its functionality—in having a more distributed model.

Mr Barr: That is why we have gone distributed, not with one large single battery.

MR BRADDOCK: Whilst not asking for subsidies, would there still be encouragement available from the government for community groups or cooperatives to have the ability to invest in a variety of different ways in that?

Mr Barr: I think so. That will probably be necessary in identifying potential locations that comply with planning and other environmental considerations. And in some instances, we might need to facilitate changes to the Territory Plan in order to facilitate that sort of investment. That has the potential to be controversial—or not. Anything in the planning field in the ACT has the potential to be controversial.

My sense of it at this point is that the facilities themselves are not considered undesirable by the community: being somewhere near a battery, even at a community scale, would not be seen as reducing land values, polluting or being something that would strike at the hearts of NIMBYs or BANANAs—build absolutely nothing anywhere near anyone—in the community. I think it would meet less resistance in terms of government facilitation to identify potential sites, for example.

The only other obvious contributing entity here is Evoenergy, which will provide advice and make its own determinations on where network augmentation could be prevented through the location of battery storage.

MR BRADDOCK: There has been a definite theme from some of our hearings that research and development in technology is not necessarily what is required but that it is more about the social sciences areas and how we achieve penetration to a substantive extent within a highly urbanised environment. What is the capacity of the ACT government to help direct or support that level of research to actually happen?

Mr Barr: It would be limited by the opportunity cost of spending the dollar somewhere else. If there is a business case that can be made that would demonstrate that that would be the most effective use of taxpayer dollars to drive a particular outcome, then, yes, of course, it would be considered worthwhile. I would need to see the particular proposals and we would need to take them through the usual cost-benefit assessments and the like. We have an open mind.

Mr Engele: I can add to that. In relation to the social policy research, the Battery Storage and Grid Integration Program at the ANU has a workstream that covers that, so there is already work being done under that. That was funded as part of the reverse auction process. There is already research underway in that field.

Mr McGlynn: I might add to that. The Battery Storage and Grid Integration Program was funded originally by the ACT government with, I think, \$4 million of start-up funding. Then there was a bit more. It has now grown to over \$11 million. It is one of Australia's leading research agencies. It has very specific streams of work, including on behaviour and regulation, and how you build that into the system, as well as on the technology side. It is quite a comprehensive approach.

The ACT also is involved in a number of other trials. We have what is called the REVS project, which is a trial of electric vehicles that can interact with the grid—to look at how that might work, what it might mean for revenue over time, how people participate and how it affects the use of the vehicle.

As one of the outcomes of the reverse auction, we have built a hydrogen refuelling station in Fyshwick, which is now available. Part of that is to find out how it works—how people use that and how people interact with these new technologies.

There are other projects as well to look at how it is done in practice, not just the technology. You are right: the technology is relatively well understood, although it still changes.

MS CASTLEY: I have a question about the transition to zero emissions vehicles. On page 6 of your submission, the third dot point talks about amending road rules and parking and vehicle arrangements. Could you tell me a bit more about that?

Mr Barr: Amending road rules?

MS CASTLEY: Amending road rules and the Parking and Vehicular Access General Code. What sorts of things are you thinking about there?

Mr Barr: It is quite a detailed list and it is not directly in my area, but we can get that information for you.

Mr McGlynn: One of the key things is the provision of changes to the rules for the bus lanes, the Adelaide Avenue bus lane in particular. That now allows for electric vehicles to drive in that lane. That is probably the main road rule change.

In terms of the parking and vehicle access code, it is about making sure that we have

the right frameworks in place to enforce electric vehicle parking regulations. We have not quite got that in place yet, but we are working on how to make sure that that happens. It is so that when someone parks in a charging spot, it is an electric vehicle, not an ICE vehicle.

MS CASTLEY: Will there be parking costs? If I park my non-electric vehicle, it costs me \$15 a day. If an electric vehicle can park in a charging station, do they also get charged? Are they the sorts of rules you are eliminating? Are you eliminating parking costs?

Mr McGlynn: That is exactly the sort of thing that we want to look at in terms of how to implement those things. How do we make sure we have the right powers to enforce that, and what is the right incentive system to make sure that that happens well? It includes not just ensuring that the right vehicles park but, in some cases, ensuring that they do not park for too long. If it is a fast charger, you do not want someone to park there all day.

THE CHAIR: ACTCOSS's submission says:

It is critical that an equity lens is embedded in renewable energy innovation in the ACT so that it contributes to achieving a just transition.

Could you speak on a just transition and how we are going about that?

Mr Barr: This is a point that has been raised numerous times during the last several decades; it is not a new issue. There are a variety of ways in which those who do not have the financial means to participate themselves or need some financial support in order to meet increased costs associated with transition have been supported.

The most practical example is that, in the last week, there was an increase in the utilities concession to \$800 annually. That supports 31,000 Canberra householders who are largely on statutory commonwealth income support—a pension, or JobStart or JobKeeper as they were previously. That level of financial support has been provided. That is a very practical way to endeavour to assist households in meeting the increased costs associated with transition. In other instances, there have been a range of direct supports at a household level to improve the energy efficiency of individual properties, whether they are privately owned or publicly owned, to reduce the running costs of those properties. They are some practical examples.

More broadly, in the ACT context, we have not had to deal so much with the loss of jobs associated with the transition away from one particular type of energy production to another. As we were importing 100 per cent of our fossil-fuel-powered energy prior to our renewable energy contracts from interstate, there were not jobs in the ACT in the coalmining industry, for example, so the transition here has been a net addition to employment in that sector. Some of the examples that Gene referred to earlier in terms of procurement co-investment requirements have in fact generated new employment opportunities in the ACT.

Any assessment of a just transition needs to look not just at household or individual income support but also at some of the economy-wide benefits. That has been a

feature of the government's policy approach to date and will continue to be in the future. ACTCOSS raise an important point, but they are not the first to raise that issue, nor will they be the last.

MR BRADDOCK: The government submission refers to the challenges of national regulation but also identifies regulatory sandboxes as a potential opportunity for the ACT. Is the ACT government keen to pursue that? Has it started working with the national regulators in that space?

Mr Barr: We could argue that some of that work is already in place, but, yes, I think there is an appetite to do more. We will continue to engage with the regulators in a number of different areas associated with some of the projects that we are currently pursuing and, more broadly, at a national level, through the national cabinet energy ministers council and other opportunities where we can both seek to influence national arrangements and, potentially, as you say, carve out specific opportunities for innovation within our own jurisdiction.

MS CASTLEY: I have a question about the renewables innovation hub. Apparently there were 30 businesses using the hub, but then it closed down for an online option. What happened?

Mr McGlynn: It is important to distinguish the renewables hub as a place from the renewables hub as a set of companies that are interested in talking to each other. Originally we had a location in Moore Street which was identified as a hub. It was a place where people could co-share, where people could share offices and talk to each other and hold events. There was an agreement to not continue with that function but to roll the renewables energy innovation hub into a broader innovation hub that is a few blocks down on Moore Street, CBRIN, so that we can connect the renewable energy industry with other industries across the ACT and they can broaden out.

At the same time, the funding for the activities of the hub continued. We have a contractor, the Clean Energy Council, that still manages those activities. It tries to bring people together into events, helps them make linkages across different businesses, and does those sorts of things. They have started some new models.

It was very unfortunate that that change happened—I cannot remember the exact date—early in 2020. Then COVID came along, and that has not helped with getting people together and building it up. The hub as a concept is still there, as a function. It is just that the location has now been combined with CBRIN.

MS CASTLEY: It was 30 businesses. Do we still have those same 30 businesses? Has it grown? Has the business uptake dropped off?

Mr McGlynn: I do not have the numbers with me. My recollection is that it is probably bigger now. I can check and provide the numbers on notice. It certainly has not dropped to nothing. There has always been a situation where some companies come in and some companies come out. I do not know what the exact numbers are now.

MS CASTLEY: On page 11 of your submission, you say:

The SEC has seen the opportunity through this platform to mentor export opportunities for businesses and provide almost direct connections to countries through Canberra's unique access to embassies in the ACT.

Can you explain that, break it down a bit for me?

Mr McGlynn: Sorry, which page?

MS CASTLEY: It is at the top of page 11:

The SEC has seen the opportunity through this platform to mentor export opportunities for businesses and provide almost direct connections to countries through Canberra's unique access to embassies in the ACT.

What is the outcome of that? What does that mean?

Mr McGlynn: I can't find it here. I do not know what the word "almost" means; that throws me too. It might have been a typo; I can't tell. I think it is just referring to the fact that, as the capital, we have embassies from all around the world; they are interested in things; and we have interactions with them. I would have to go back to some of the specifics, but I know that, for example, a number of embassies are very interested in our hydrogen refuelling station. They want to see how that progresses and are now interested in buying hydrogen vehicles to use themselves because they want to either have that experience or get that experience to bring back to their countries.

MS CASTLEY: Which embassies? Do you know, off the top of your head?

Mr McGlynn: I will get the countries wrong and they will hate me for that, so I will take it on notice.

MS CASTLEY: Thank you.

THE CHAIR: I want to follow on from the just transition idea and go to community education. With a lot of the content that we have talked about through these inquiries, it is very difficult, if you have not worked in that space or you are not a scientist, to understand hydrogen transitions and all these types of things. I am interested in understanding more about how we bring the community with us on this journey, particularly with batteries and things like that, which are quite complex. I am interested in how that works.

Mr Barr: With the Sustainable Household Scheme there has been a great deal of community interest and a little more than 5,000 pre-registrations. We have utilised that opportunity to step people through the process. That self-identification of interested households enables the team within ACT government to have some of those conversations about the nature of particular products or new technologies that households might be interested in, effectively for participating in the scheme; borrowing; and then having them installed. There is an educative element in that regard.

Some of the issues require more than a 30-second television ad. It tends to be beneficial for us, in the first instance, to drive a degree of interest in just pre-registering for the scheme and then being able to have more detailed engagement with individual households about the range of options and choices that are before them.

In any community there is going to be a group who are very eager, who understand and have done a lot of their own research, and who may have a relatively small number of very technical questions that they wish to ask either government or industry experts. There will be others who are broadly interested in the concept but need a bit more time and some further engagement on exactly what their options are and the best pathway forward, given their individual circumstances. Then, at the top of the inverted pyramid, it is just about generating interest in the community more broadly.

It is not dissimilar to how tourism marketing works. You establish a degree of interest in a particular product or destination; then, as people pursue that further, it tends to funnel down to where people go from “I am broadly interested” to “I am going to invest” and then “These are the things I want to invest in.” It is not markedly different in that regard.

There is a degree of experience at the government end in how to manage people through that sort of broad interest, investment intent, actual investment decisions, and then the range of supports that would be necessary to see someone go from the beginning of the journey through to making an investment decision in their property.

MS CASTLEY: When can people start taking part in the interest-free loan scheme?

Mr Barr: Very soon. I will make an announcement on that in the not too distant future.

MS CASTLEY: Is there a limit to the number of Canberrans who can participate?

Mr Barr: There is \$150 million available, so in theory, if everyone went for the full \$15,000, that would be 10,000 households. But not everyone will take up the full \$15,000, so I expect the number will be higher than 10,000.

MR BRADDOCK: I have a question about innovative financing. There is a very good role that the ACT could play in encouraging that—not necessarily subsidising but encouraging innovative ways to finance, whether that might be for renters being able to buy into a solar farm or a community battery or the ACT government supporting take-up in the community through the bulk purchasing power it has. Is that something you are considering?

Mr Barr: Yes; we will look at those options. It is largely a sort of opportunity cost question, given the limited available capital for public investment. Then there is a policy question for government to determine what, if any, rate of return we want on that investment.

Hypothetically speaking, a number of jurisdictions in Australia own their own energy

generation capability. That generates a financial return to the taxpayers of that state. We are not currently in that position directly. We have part ownership of an energy retail business and part ownership of a distribution network, so we do receive some dividends back into the territory budget from our energy and utility activities.

There is potential, in light of the South Australian experience with the big battery linked to the Hornsdale wind farm, for there to be a return to territory taxpayers from a government investment. That is not the exclusive purpose of the government investment, but it is a desirable outcome, I would say, as territory Treasurer, that we would get some return on the investment on behalf of taxpayers. But we have a number of other policy objectives that we are seeking to achieve. They are not necessarily in direct competition with arbitrage and the NEM, but we would need to reserve a portion of our investment to achieve a return that would meet the cost of the capital that we are borrowing in order to invest in these programs.

MR BRADDOCK: In terms of return on investment, that is definitely something that the government should be interested in, but I am also thinking of providing the framework to enable households to invest their money and enjoy the benefits, even if they are not homeowners.

Mr Barr: Yes. That is the intent of both the Sustainable Household Scheme and the \$50 million that the government will invest in support for low-income households, both within the public housing sector and in low-income private rental.

MR BRADDOCK: My other concern is that too often we have seen that subsidies or incentives put into place have led to an increase in prices, and the money has ended up in the pockets of businesses rather than going to those who are implementing the change. How can we make sure that that does not happen, going forward?

Mr Barr: It does mean a need to carefully manage the demand side for particular programs, which is why the scheme is running over at least five years. I have been very clear in all the public communications that it is not a mad rush in the first six months; it is not a case where, if you do not sign up now, you cannot participate later. Given that the early sign-up is a little over 5,000, I believe, there is room in the longer term for people to join the scheme later.

We will also be very strict in relation to accredited suppliers and accredited products. Whilst we will not close the door on innovation and new entrants, the purpose here is not to attract new suppliers into the industry. I am happy for new products to come in over time, because that is clearly going to be the case, but to anyone out there who is listening to this and thinking, "Why don't I set up and establish in these particular industry sectors?" I say this: if you are thinking of doing that and seeking to access this scheme, that is not what this scheme is about.

We will be managing the process of access to the loans in a measured way so that we are providing a steady diet of work, not a binge at the beginning. That is an important lesson that has been learned from previous government market interventions that have occurred at a state or commonwealth level over the last several decades.

MS CASTLEY: I cannot find the page number, but I remember reading that private

investment in renewables was still low. What are your thoughts on that?

Mr Barr: As in business investment or household investment?

MS CASTLEY: It just said private.

Mr Barr: As production scales up in the range of products and their price falls, it starts to be more economic for businesses and households. Clearly, price has been a factor in the early stages of some of the new technologies; that is typical of any new technology development.

MS CASTLEY: What is the plan to get around that?

Mr Barr: Manufacturing at scale brings price down. In the interim, the plan is the government schemes, the government co-investment and the capacity to support households through interest-free loans. That is the bridge between where we were and where the market will ultimately get to.

There are interesting behavioural economics questions around the point at which people will make decisions in investing their own money. The best evidence of this is the uptake of solar panels. At the beginning of the process and the change, it required very generous feed-in tariffs and a degree of public subsidy. Then the price of solar panels fell to the point where they became very affordable and people were able to make their money back very quickly. That has led to a further wave of household-level and business-level decisions to invest. The same path will be followed with other technologies. That has been the history of economics, manufacturing and new technology uptake. Mobile phones were once very expensive luxury items; now they are ubiquitous.

THE CHAIR: Thank you very much for your time today.

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

ENGELE, MR SAM, Coordinator-General, Climate Action, Policy and Cabinet Division, Chief Minister, Treasury and Economic Development Directorate

HARDING, MR DANIEL, Executive Branch Manager, Climate Change and Energy Policy, Environment, Planning and Sustainable Development Directorate

McGLYNN, MR GENE, Executive Group Manager, Climate Change and Energy, Environment, Planning and Sustainable Development Directorate

THE CHAIR: This is the second hearing of the inquiry into renewable energy innovation in the ACT. Thank you, Minister Rattenbury and officials, for attending. I remind you of the privilege statement in front of you. Can I please get confirmation for the record that you understand the implications of the privilege statement?

Mr Rattenbury: Yes.

THE CHAIR: Minister Rattenbury, we have had a fair few submissions on the Energy Efficiency Improvement Scheme. Firstly, can you talk to that a bit? One of the things has been about opening up that scheme to other providers in the ACT. There have been some challenges for other providers who are not contracted by, I think, ActewAGL; is that right?

Mr Rattenbury: Yes.

THE CHAIR: I was wondering if you could talk about that.

Mr Rattenbury: Overall, the EEIS has been an enormously successful scheme that, since 2013, has seen 78,000 households and businesses benefit from the scheme. There is a priority household subset. Each year, we require a certain number of low-income households, the priority households, to be supported by the scheme. The scheme basically provides people with free energy efficiency upgrades.

I think it has been really successful. The estimates are that, through the measures that have already been taken, there have been over \$445 million of lifetime energy bill savings for the businesses and households that have participated. For the average household that joins the scheme, they can save \$5.80 a week off their energy bill.

These are really important improvements that have not only cut energy bills and helped cut greenhouse gas emissions but also improved people's quality of life through having better insulated homes and all those kinds of things. That is the big picture. On the specific issue of providers accessing the scheme, we had a review of the scheme in 2019, I think, and at that time the scheme was, again, considered to be very successful, with no major changes asked for.

Since then we have had some local businesses approach us and express concerns about access issues. We are now having a look at that. I think they have raised some pretty interesting points. They see a particular way of reforming it. We are now in the process of looking into the technical details of that and having consultations with

others. There are other views, as you can imagine, and we are trying to sift through those, because to make the change that has been proposed would be quite a significant re-scoping of the scheme. We just have to work through the details of that.

THE CHAIR: Excellent.

MR BRADDOCK: The ANU submission had an interesting idea around the surrender of the generation certificates and how that has a flow-on impact on businesses not being able to claim zero emission generation if they are located in the ACT. Is that something the government has considered?

Mr Rattenbury: I did have a look at that ANU sub after hearing about it. I must confess that I probably need to ask them some more questions. I am not quite sure what they were getting at. At the moment, we retire the LGCs to account for our 100 per cent renewable electricity target. The LGCs are directly retired, and that is the offset that creates our 100 per cent renewable electricity compliance, so to speak.

If a business in the ACT wanted to claim that they were carbon neutral, for example—which I think was part of where the ANU was coming from—that business, at the moment, could certainly say that, because of the ACT's 100 per cent renewable electricity compliance, that component of their business was carbon neutral.

They would then have other parts of their business processes that they would need to work on. They might need to get EVs or have solar or do tree offsets. There would be a range of ways that they would cut their waste. There are a whole lot of things a business might do if they wanted to position themselves as being carbon neutral, which I think would be a great marketing advantage for many companies, as well as an important thing to do.

MR BRADDOCK: Thank you.

MS CASTLEY: Maybe linked to that, we note in the government submission that private uptake is low; private investment is low. The Chief Minister explained that for households there are all sorts of great schemes. From a business perspective, with regard to that and getting a fleet of electric vehicles et cetera, what will the government do to assist businesses if they want to get involved? It is a significant financial investment.

Mr Rattenbury: We have made a number of programs in recent times, as I have alluded to. They are, for example, allowed to access the Energy Efficiency Improvement Scheme. We have had a team in Actsmart, a specific business team, who have been out helping businesses in recent years to do that.

One of the questions we have pondered is why more businesses are not putting solar in themselves, for example. We actually did some research on that. The thing that came back was that, for a lot of businesses, it was not their core area of expertise and they were nervous about making the investment. They felt that if they went to a company and asked for a quote, they did not know whether or not it was good value for money. So one of the things we have built up is the capability in government to give advice to businesses around not which company to go with but why solar should

work for you. For most businesses, investing in a solar system, if you own your own premises, is one of the best returns on investment you can get.

MS CASTLEY: How many businesses do own their own premises, though?

Mr Rattenbury: That is one of the other barriers. For those that are in leased premises, it is obviously problematic. That brings you back to a split incentive problem, because the landlord does not want to spend the money on the solar, but the business would benefit. I do not think anybody has come up with a great plan to overcome the split incentive problem yet.

MS CASTLEY: It limits their ability to become a totally green energy business, I suppose. If they cannot get solar, what are the options for them?

Mr Rattenbury: Through our 100 per cent renewable target, every business in Canberra now has green electricity coming out of their power points. In a sense, we have taken a bigger picture approach to that and solved that for businesses. I think that getting your own solar both adds to our local supply of renewable electricity and can be a cost saver, frankly, for most businesses. Your payback on those systems would be somewhere between three and five years in terms of overcoming the initial capital, then after that you are into making money, essentially, or reducing cost, depending on how you want to frame the description.

MS CASTLEY: Sure.

Mr Harding: I can add to that. There are a couple of additional changes that the government has made to a number of existing programs and some new announcements. You would be familiar with the Next Generation Energy Storage Program, which is supporting small customer behind-the-meter battery storage systems. That program has been in place since 2016. In our continued reform of and improvement to that program, we increased the size of the system that can receive a subsidy.

One of the working theories was that the size of the system that would be suitable for a business would be much larger than for a household. So the level of subsidy that could be paid on the size of the system was increased so as to reduce that barrier to entry for businesses that might have different load profiles. They could actually receive similar subsidies to households but for a larger battery. That is one of the changes.

In relation to the announcements in the budget on 9 February, as part of the package of developing a zero emission vehicle industry in the ACT, one of the commitments is to develop what is described as a fleet advisory service. The ACT government is now, to our knowledge, the largest electric vehicle fleet operator in Australia. There are currently around 140 or so zero emission vehicles in the ACT government's fleet. As you would imagine, we have learnt a great deal in government about how to integrate these kinds of vehicles into our fleet.

It is not just about the total cost of ownership and what that looks like with leasing, three versus four years, and so on. It is also about the integration of charging

infrastructure: how do people like to use vehicles and does it suit the business that the ACT government conducts? We have learnt a great deal and there is a lot of good public knowledge in that experience.

The fleet advisory service is designed, when stood up, to be able to provide that sort of knowledge and learning to businesses, to fleet users that are located in the territory, so that they do not make the same mistakes that we might have made. It is about reducing that perceived barrier to entry, that information asymmetry that exists, and actually encouraging them to transition their own vehicle fleets over to zero emission vehicles more quickly.

THE CHAIR: We heard from CIT about what they were doing in terms of training mechanics and that we need to move into that space. In terms of having the largest fleet of electric vehicles, are we moving into the training space and trying to build up the skills of people in the ACT?

Mr Harding: As part of CIT's renewable skills centre of excellence, they have established a 20-year program of work where funding from one of the successful bidders from a past renewable electricity reverse auction is actually funding additional and new activity in that centre of excellence. A lot of the focus for the last few years of the centre has been on small-scale renewables, solar and battery, and developing training courses and packages to prepare the tradespeople of the future to be ready for when, for example, a large number of small-scale renewables are expected to come in on the back of the Sustainable Household Scheme and, indeed, the existing battery program.

I am recognising that at some point there will be a mass market transition over to zero emission vehicles. Part of the work with that skills centre of excellence is getting the automotive school at CIT and the electrical school—both of which exist—to say, “What are the new training modules, training packages and units of competency that are necessary?” It is about working out the nuts and bolts of the competencies that technicians will need to acquire so that they are able to go ahead and service vehicles. The last thing you want is your vehicles heading back to Sydney to get serviced. We want to have that capability in the ACT. Through the CIT, we are working actively to build that training competency and package. We would like to think that every mechanic, as part of their core apprenticeship and training, would get those units of competency, given the long-term direction and expectation for the automotive sector.

Mr Rattenbury: You remind me of an interesting case study of how Canberra's reputation is starting to see more innovation flow. We had an approach earlier in the year from the Mitchell Traders Association. They mentioned the fact that there are a large number of car repair and servicing places in Mitchell and they wanted to understand how to position themselves in future to approach government and say, “Can we talk about how we can engage with our industry here in Mitchell too?” We have been able to tee them up to talk to a range of people to help that transition. The ACT has got a reputation now and people are starting to see that. They are looking at how to innovate. So it becomes a bit of a self-fulfilling cycle in that sense.

MR BRADDOCK: The question I have is in terms of the opportunity to finance innovatively. I think that is an area that can be explored and is potentially an area of

great yield—for example, the renters who cannot do it on their own roof being able to purchase generational storage, or the businesses that are in a similar state. There could be quite a fruitful role for the government to support those sorts of innovative financing models for energy transition, going forward. Is that something the government is considering or is open to?

Mr Rattenbury: We are certainly open to those things. I would point to, for example, the community solar farm out at Majura, which is a megawatt of solar. It is the largest community solar farm in Australia. We supported that through a specific allocation, the feed-in tariff, which has enabled that model to get up. I hope to see that replicated either in the ACT or nationally now that the model has been created here. That is one example.

I think the Sustainable Household Scheme is also setting an example of how to do things, and other permutations will come from that. Similarly, the renewable energy innovation fund enables people to come forward with those ideas. So we have a few areas where I think that innovation can operate, and we are very open to people coming forward with other ideas.

MR BRADDOCK: So, for example, if a cooperative or a group of neighbours came forward with an idea for a community battery, is that something that the government would be able to support?

Mr Rattenbury: Potentially, yes. We have heard that those sorts of projects are around. It is just about finding that balance between the government being supportive to help get things going and not just handing over taxpayers' money for projects that, frankly, could be done more efficiently. There is a tension there for us to empower the community but to be mindful of getting value for money as we support different projects.

Mr Engele: On the community battery process that we are going through at the moment, we had a co-design workshop with the ANU and community batteries was one area that was identified as an opportunity. The next phase of that piece of work is a series of EOIs. We will be working out the different types of battery infrastructure that we will be putting out. As part of that, if there are expressions of interest from community groups, that would be the process where they could put those ideas forward and then we have a formal way of considering them.

Mr Rattenbury: It is very similar to how we did the community solar farm; it is the same premise.

Mr Engele: It is the same model.

Mr Rattenbury: Allocating some of the overall project to community projects.

MR BRADDOCK: Yes, and opening it up for community investment or even providing a loan to the community or guaranteeing their loan so that they can invest over a period rather than face the upfront costs.

Mr Rattenbury: Which is effectively what we did with the feed-in tariff, where it

provided a guaranteed source of income which enabled them to get the financing for their community solar farm. There are all sorts of permutations.

MR BRADDOCK: Thank you.

MS CASTLEY: I have a question on the REIF grants—\$1.1 million in 2016 and 2019. How many of those people who received the grants are still in business and offering information to the government, and how many of them have been taken on board, I guess? Is that the idea of a grant? That would be my thought.

Mr Rattenbury: I think Mr McGlynn can provide some more details. Certainly, if you look through the list, a group like Reposit Power has been extremely successful and has gone from strength to strength. Perhaps we can go through the detail of it.

Mr McGlynn: I am not actually aware of any of these that are not in operation anymore. I might need to check on that. Basically, we have given out, I think, 14 grants over the two rounds, of which I think six are now complete. They are not to create a new company. They are basically to test a new product, a new technology or a new approach—that sort of thing. We successfully completed six of those projects. There is another one where, for reasons I cannot quite recall, we discontinued the project because we felt it was not going to deliver the outcomes that we wanted.

The other seven are still in train to be completed. The ones that are completed have completed whatever is relevant to those. As the minister mentioned, Reposit Power has demonstrated an ability to basically take PV storage and turn it into a network of storage that then allows that system to be operated as a mini-network or a mini-generation source on its own.

The other projects, similarly, are demonstrating various new approaches to things. One of them is about storing hydrogen in vertical shafts. The benefit of that is that it means you can store large amounts of hydrogen within relatively small geographic areas. That was really what that was meant to demonstrate. They have shown how that can be done. Obviously, further development and work would need to happen if that were to be pursued, and they have demonstrated that. Similarly, all the others demonstrate those sorts of technological things.

MS CASTLEY: So the government is interested in continuing to look into hydrogen?

Mr Rattenbury: Yes. I think, for the ACT, our role in the hydrogen sector is going to be in the research and consuming space. I do not expect the ACT to be a significant hydrogen producer. The large-scale hydrogen production will occur where there are large-scale renewables. The way that hydrogen will be produced cost-effectively is with electricity at essentially zero marginal cost. The large-scale wind farms in South Australia, where there is excess power, and massive solar farms in other places—we are not going to have those here. But we are very well positioned from a research, development and testing point of view for hydrogen, as well as being a potential rollout customer.

THE CHAIR: I am interested to hear about the battery project with the ANU and how that is working. Also, that is potentially a key example, in this inquiry, of

renewable energy innovation and collaboration. What have been some of the strengths and limitations in establishing that?

Mr Engele: It has been a really good collaboration. They were brought on board commercially to run the co-design workshop. The co-design was really the first step to get all of the different stakeholders involved so that the industry, consumer groups and other research institutes could look at the opportunities, as part of the Big Canberra Battery project. That has generated a report for us, which we are considering at the moment. That lays the basis for us then to build on that with the EOI process.

The ANU school have not just been a resource for that project; they are also involved in a number of other ones. I know they are involved in the Jacka battery project as well. They already have some research on their website about that, and other opportunities in the ACT. They have been a really useful research resource for us.

Mr Harding: With the establishment of the research program at the ANU, it really identified a bit of a gap, when it was established in 2016-18, in recognition that a huge volume of our future energy grid will actually be located behind the meter, in people's homes and businesses. I think it was Bloomberg New Energy Finance that estimated that 40 per cent of Australia's total electricity generating capacity would be behind the meter by 2040.

If you think about the traditional way that we build energy networks, which is large generators, through transmission infrastructure overland to substation distribution lines and then to homes in a one-way flow, the future energy network will actually be two-way, because customers will not be passive takers of energy; they will be generators in their own right and they will be sharing or trading back to the grid, to their peers, or supporting the network.

The establishment of this research group identifies that fundamental energy transition. I think it is fair to say that, across Australia, they are a unique research group, albeit now based in Canberra. There are about 35 people sitting over at ANU as part of this research group. They bring together multiple threads of research and they are really proactive in how to deploy that in practical future terms.

Mr Engele, the minister and Mr McGlynn have given examples of how that research group, now based here on our doorstep, has been a fantastic resource. We are in partnership on a number of projects. The REVS project, the vehicle-to-grid, is a great example, where they are the lead research partner and 50 vehicle-to-grid-enabled vehicles are now being integrated into the ACT fleet.

There are multiple research institutes in Australia doing similar things. It is not necessarily about all of the components in how to integrate storage and renewables into that future system, and how to make it work. The fact that it is here and that we are in an active partnership on projects with that group is a fantastic resource.

MR BRADDOCK: In an earlier question I was referring to the importance of social science research. Going through the REIF grants, they are very technology focused, and less so on the behavioural side. Is there something about the design of that scheme? Does it need to be amended? Are we giving due weight to social science

research?

Mr Rattenbury: It is an interesting reflection. It probably reflects the point in time when the scheme was launched and where energy was at. With so many of these ideas, think about how much the whole space has moved in the last five or six years. We are a lot further ahead because of these kinds of grants. There is general acceptance that the electricity grid will go through an enormous transformation. That was not the general public discourse probably five years ago, whereas it is now. That probably reflects the nature of what was there previously.

Also, they are the people who have applied; they were the people who actually needed to get going. The issues that you raise are starting to come to the fore now, as it is becoming more of a mainstream issue. These were probably fairly niche projects and understandings five or six years ago, when this scheme was being put together and when the grants were being applied for.

MR BRADDOCK: I suppose my interest is: going forward, will the government be starting to look at that transition and at where it allocates its resource dollars?

Mr Rattenbury: Potentially. That is part of the broader climate change strategy through to 2025. We very clearly identified in that process with the first climate phase, where we reduced our emissions by over 40 per cent, that the government largely did it through moving to 100 per cent renewables. The community just went along with it and were pretty supportive, on the whole. The next phase will require much more community engagement and much more behaviour change, because we are getting into areas where it is harder to cut emissions. Across the board, our thinking on climate issues is that we need to think less technically and be more, as you put it, socially research minded, for want of a better expression, about how we talk to the community about the role they have to play.

MS CASTLEY: I have a question about the Climate Change Council. Is there not enough expertise within the directorate? Why do we need a council? Is it not more bureaucracy? Would that money be better spent elsewhere, on another project?

Mr Rattenbury: There are probably two parts to that. The council was created back in 2012—or was it 2010?

Mr Harding: Established by the legislation in 2010.

Mr Rattenbury: That is right; it was established by legislation which we are about to review, or we are in the process of reviewing. Again, back then, 10 years ago, there was a bit of a sense that it was great to have some expertise brought together. The council have played a really important role over the years in talking directly to the community and not being government but being experts who are perceived to be a bit independent. They have also provided some excellent advice.

Their paper on what the ACT's climate target should be translated directly into the legislation. It is not that we lack the expertise in the government. We have some world-class people in Canberra who are available to be an extra resource to government. In terms of your question about cost, it actually costs us very little.

I think the budget for the council is \$40,000 a year. For the expertise that we get, it is really a bargain.

THE CHAIR: Thank you very much for attending today. It was very informative.

The committee adjourned at 3 pm.