



COMMONWEALTH OF AUSTRALIA

# Official Committee Hansard

## SENATE

ENVIRONMENT AND COMMUNICATIONS LEGISLATION  
COMMITTEE

**Estimates**

Public

MONDAY, 22 MAY 2023

CANBERRA

BY AUTHORITY OF THE SENATE

**ENVIRONMENT AND COMMUNICATIONS LEGISLATION COMMITTEE**

**Monday, 22 May 2023**

**Members in attendance:** Senators Allman-Payne, Cadell, Cox, Davey, David Pocock, Duniam, Grogan, Hanson-Young, Hughes, McKim, Payman, Rennick, Rice, Roberts, Thorpe, Van, Waters and Whish-Wilson

**CLIMATE CHANGE, ENERGY, THE ENVIRONMENT AND WATER PORTFOLIO****In Attendance**

Senator McAllister, Assistant Minister for Climate Change and Energy

**Department of Climate Change, Energy, the Environment and Water****Executive**

Mr David Fredericks PSM, Secretary

Ms Jo Evans PSM, Deputy Secretary

Mr Simon Duggan, Deputy Secretary

Ms Cassandra Kennedy, Acting Deputy Secretary

Mr Dean Knudson, Deputy Secretary

Mr Sean Sullivan, Deputy Secretary

Ms Lyn O'Connell PSM, Deputy Secretary

Ms Luise McCulloch, Deputy Secretary

**Corporate****Finance Division**

Mr Robert Hanlon, Chief Finance Officer

Ms Michelle Crowther, Branch Head, Financial Management Branch

**IT Services**

Mr Timothy Spackman, Chief Information Officer

**Legal (Chief Counsel)**

Ms Kate Lalor, Chief Counsel

Mr Graeme Grosse, Branch Head, Environment Compliance Branch

**Operations Division**

Ms Linda Ward, Chief People Officer

Mr Nathan Hannigan, Branch Head, People

**Portfolio Strategy Division**

Mr Andrew McNee, Division Head

Ms Michelle Croker, Division Head

Mr Adam McKissack, Branch Head, Policy and Portfolio Strategy Branch

Mr Chris Johnston, Branch Head, International Strategy and Engagement Branch

Ms Dana Sutton, Branch Head, Ministerial Liaison and Governance Branch

Ms Juanita Pettit, Branch Head, Data and Analysis Branch

Ms Jeanette Corbitt, Acting Branch Head, First Nations Branch

**Outcome 1****Adaptation and New Industries Division**

Mr Shane Gaddes, Division Head

Mr Paul Murphy, Branch Head, Offshore Renewables Branch

Mr Chris Johnston, Branch Head, Climate Risks and Impacts Branch

Ms Nicole Mitchell, Branch Head, Climate Policy Branch

Ms Catherine Zerger, Branch Head, Hydrogen Branch

Ms Kathryn Smith, Branch Head, National Adaptation Policy Office

**Emissions Reduction Division**

Ms Kath Rowley, Division Head

Ms Melanie Ford, Branch Head, National Inventory Systems and International Reporting Branch

Ms Alannah Pentony, Branch Head, Land and Climate Active Branch

Mr Matthew Ryan, Branch Head, Transport and Regions Branch

### **Electricity Division**

Ms Kirsty Gowans, Division Head

Mr Geoff Whelan, Branch Head, Electricity Markets Branch

Ms Melissa Pang, Branch Head, Market Reform Branch

Mr James White, Branch Head, Renewables and Distributed Energy Branch

Mr Salim Mazouz, Branch Head, Firming Mechanisms Taskforce

Mr Paul Johnson, Principal Adviser, Rewiring the Nation Office

### **Energy Division**

Ms Clare McLaughlin, Division Head

Mr Martin Squire, Branch Head, Energy Security and International Branch

Ms Penelope Sirault, Branch Head, Residential Energy Efficiency Branch

Dr Peta Derham, Branch Head, Energy Performance Strategy

Ms Nicole Thomas, Branch Head, Energy Governance

### **Gas and Liquid Fuels Division**

Mr Chris Videroni, Acting Division Head

Ms Miranda Lello, Branch Head, Liquid Fuels Branch

Mr Stuart Richardson, Branch Head, Gas Markets Branch

Mr Andrew Pankowski, Acting Branch Head, Gas Security Branch

### **International Climate and Net Zero Pathways**

Ms Kushla Munro, Division Head

Dr Sally Box, Branch Head, Climate Negotiations and Engagement Branch

Mr David Higgins, Branch Head, International Net Zero Branch

Ms Gaia Puleston, Branch Head, Net Zero Innovation and Partnerships Branch

### **Outcome 2**

#### **Biodiversity Conservation Division**

Dr Ilse Kiessling, Acting Division Head, Protected Species and Communities Branch

Mr Steve Costello, Branch Head, Program Delivery Branch

Dr Alison McMorrow, Branch Head, Biodiversity Policy and Water Science Branch

Dr Fiona Fraser, Threatened Species Commissioner, Office of the Threatened Species Commissioner

Mr Glenn Block, Branch Head, Strategy and Programs Branch

#### **Commonwealth Environmental Water Office**

Dr Simon Banks, Division Head

Ms Hilary Johnson, Branch Head, Engagement, Monitoring and Southern Basin

Ms Liz Rodway, Acting Branch Head, Policy, Aquatic Ecosystems and Northern Basin

#### **Biodiversity Markets, Economics and Environmental Sciences Division**

Mr Jeremy Thomas, Acting Branch Head, Biodiversity Markets Branch

Ms Sonia Fedorow-Spry, Acting Branch Head, Environmental Science and Nature Based Solutions Branch

#### **Environment Approvals Division**

Mr Bruce Edwards, Division Head

Ms Kate Gowland, Branch Head, Environment Assessments NSW and ACT

Ms Kylie Calhoun, Branch Head, Environment Assessments WEST

Mr Brendan Linton-Smith, Acting Branch Head, Environment Assessments VIC and TAS and Post Approvals

Mr Declan O'Connor-Cox, Branch Head, Environment Assessments QLD

Ms Tharani Vithanage, Branch Head, Governance and Reform Branch

**Environment Protection Division**

Ms Kate Lynch, Division Head

Ms Chloe Bird, Branch Head, Waste Regulation and Stewardship Branch

Ms Rachel Burgess, Branch Head, Waste Policy and Planning

**First Nations, Heritage, Wildlife and Planning Division**

Dr Melissa McEwen, Division Head

Ms Kat Miller, Acting Branch Head, First Nations Heritage Office

**Heritage, Reef and Ocean Division**

Ms Michelle Dumazel, Division Head, Heritage

Ms Katrina Maguire, Division Head

Ms Suzi Heaton, Acting Branch Head, World and National Heritage Branch

Ms Belinda Jago, Acting Branch Head, Oceans and Wildlife Branch

Mr John Foster, Branch Head, Great Barrier Reef

**Taskforce for Environmental Legislative Reform and establishment of an EPA**

Mr James Tregurtha, Head of Taskforce

**Environmental Policy Integration**

Mr Greg Manning, Division Head, Nature Positive Integration

**Outcome 3**

**Australian Antarctic Division**

Ms Emma Campbell, Division Head

Professor Nicole Webster, Chief Scientist

**Agencies and Statutory Authorities**

**Australian Energy Infrastructure Commissioner**

Mr Andrew Dyer, Commissioner

**Australian Energy Regulator**

Ms Clare Savage, Chair

Ms Anthea Harris, Chief Executive Officer

**Australian Institute of Marine Sciences**

Dr Paul Hardisty, Chief Executive Officer

Mr Basil Ahyick, Chief Finance Officer

**Australian Renewable Energy Agency**

Mr Darren Miller, Chief Executive Officer

Mr Chris Faris, Chief Operating Officer

Mr Ian Kay, Chief Financial Officer

**Bureau of Meteorology**

Dr Andrew Johnson, Chief Executive Officer and Director of Meteorology

Dr Peter Stone, Group Executive, Business Solutions

Ms Paula Goodwin, Chief Operating Officer, Group Executive Enterprise Services

Ms Joanna Stone, Chief Financial Officer

**Climate Change Authority**

Mr Brad Archer, Chief Executive Officer

Ms Eliza Murray, General Manager

Dr Matt Searson, Acting General Manager

Ms Samantha MacCready, Acting General Manager

**Clean Energy Finance Corporation**

Mr Ian Learmonth, Chief Executive Officer  
Mr Andrew Powell, Chief Finance Officer  
Mr Simon Every, Head of Government and Stakeholder Relations

**Clean Energy Regulator**

Mr David Parker AM, Chair  
Mr Mark Williamson, Executive General Manager  
Ms Karen Najjar, Chief Operations Officer  
Ms Bronwen Shelley, General Counsel  
Ms Jane Wardlaw, General Manager  
Ms Michelle Crosbie, General Manager

**Director of National Parks**

Ms Jody Swirepik PSM, Director of National Parks  
Mr Jason Mundy, Division Head  
Mr Ranga Parimala, Branch Head

**Great Barrier Reef Marine Park Authority**

Mr Josh Thomas, Chief Executive Officer  
Mr Richard Quincey, General Manager, Reef Protection Branch  
Ms Jameelie Fletchett, Chief Operating Officer  
Mr Ian Walker, General Manager, Major Projects  
Ms Margaret Johnson, General Manager, Strategic Policy and Partnerships  
Dr Roger Beeden, Acting Chief Scientist

**Snowy Hydro Limited**

Mr Dennis Barnes, Managing Director and Chief Executive Officer  
Mr Roger Whitby, Chief Operating Officer

**Threatened Species Scientific Committee**

Emeritus Professor Helene Marsh, Chair

**North Queensland Water Infrastructure Authority**

Mr Matthew Squire, Acting Chief Executive Officer  
Dr Peter Wallbrink, Chief Scientist

**Committee met at 09:02**

**CHAIR (Senator Grogan):** I declare open this hearing of the Environment and Communications Legislation Committee into the 2023-24 budget estimates. I begin by acknowledging the traditional owners of the land we meet on and pay my respects to elders past, present and emerging.

The committee has fixed Friday 7 July as the date for the return of answers to questions taken on notice. The committee's proceedings today will begin with corporate matters and general questions of the Climate Change, Energy, the Environment and Water portfolio. Under standing order 26 the committee must take all evidence in public session. This includes answers to questions on notice. I remind all witnesses that, in giving evidence to the committee, they are protected by parliamentary privilege. It is unlawful for anyone to threaten or disadvantage a witness on account of evidence given to a committee and such action may be treated by the Senate as a contempt. It is also a contempt to give false or misleading evidence.

The Senate has endorsed the following test of relevance of questions at estimates hearings. Any questions going to the operational or financial position of the departments and agencies which are seeking funds in estimates are relevant questions for the purpose of estimates hearings. I remind officers that the Senate has resolved that there are no areas in connection with the expenditure of public funds where any person has a discretion to withhold details or explanations from the parliament or its committees, unless the parliament has expressly provided otherwise.

The Senate has resolved also that an officer of a department of the Commonwealth shall not be asked to give opinions on matters of policy and shall be given reasonable opportunity to refer questions asked of the officer to a superior officer or to a minister. This resolution does not preclude questions asking for explanation of policies or factual questions about when and how policies were adopted. Witnesses are reminded of the Senate order specifying the process by which a claim of public interest immunity should be raised, and I incorporate the public immunity statement into the *Hansard*.

*The extract read as follows—*

**Public interest immunity claims**

That the Senate—

(a) notes that ministers and officers have continued to refuse to provide information to Senate committees without properly raising claims of public interest immunity as required by past resolutions of the Senate;

(b) reaffirms the principles of past resolutions of the Senate by this order, to provide ministers and officers with guidance as to the proper process for raising public interest immunity claims and to consolidate those past resolutions of the Senate;

(c) orders that the following operate as an order of continuing effect:

(1) If:

(a) a Senate committee, or a senator in the course of proceedings of a committee, requests information or a document from a Commonwealth department or agency; and

(b) an officer of the department or agency to whom the request is directed believes that it may not be in the public interest to disclose the information or document to the committee, the officer shall state to the committee the ground on which the officer believes that it may not be in the public interest to disclose the information or document to the committee, and specify the harm to the public interest that could result from the disclosure of the information or document.

(2) If, after receiving the officer's statement under paragraph (1), the committee or the senator requests the officer to refer the question of the disclosure of the information or document to a responsible minister, the officer shall refer that question to the minister.

(3) If a minister, on a reference by an officer under paragraph (2), concludes that it would not be in the public interest to disclose the information or document to the committee, the minister shall provide to the committee a statement of the ground for that conclusion, specifying the harm to the public interest that could result from the disclosure of the information or document.

(4) A minister, in a statement under paragraph (3), shall indicate whether the harm to the public interest that could result from the disclosure of the information or document to the committee could result only from the publication of the information or document by the committee, or could result, equally or in part, from the disclosure of the information or document to the committee as in camera evidence.

(5) If, after considering a statement by a minister provided under paragraph (3), the committee concludes that the statement does not sufficiently justify the withholding of the information or document from the committee, the committee shall report the matter to the Senate.

(6) A decision by a committee not to report a matter to the Senate under paragraph (5) does not prevent a senator from raising the matter in the Senate in accordance with other procedures of the Senate.

(7) A statement that information or a document is not published, or is confidential, or consists of advice to, or internal deliberations of, government, in the absence of specification of the harm to the public interest that could result from the disclosure of the information or document, is not a statement that meets the requirements of paragraph (1) or (4).

(8) If a minister concludes that a statement under paragraph (3) should more appropriately be made by the head of an agency, by reason of the independence of that agency from ministerial direction or control, the minister shall inform the committee of that conclusion and the reason for that conclusion, and shall refer the matter to the head of the agency, who shall then be required to provide a statement in accordance with paragraph (3).

(d) requires the Procedure Committee to review the operation of this order and report to the Senate by 20 August 2009.

*(13 May 2009 J.1941)*

(Extract, Senate Standing Orders)

**CHAIR:** I remind all senators that, as we continue our work implementing the *Set the standard* report, as chair I will ensure that proceedings are conducted in an orderly, respectful and courteous way.

**Department of Climate Change, Energy, the Environment and Water**

[09:04]

**CHAIR:** I welcome Senator the Hon. Jenny McAllister, Assistant Minister for Climate Change and Energy, representing the Minister for Climate Change and Energy as well as the Minister for the Environment and Water. Minister, do you wish to make an opening statement?

**Senator McAllister:** No, I don't.

**CHAIR:** I welcome Mr David Fredericks, the secretary of the Department of Climate Change, Energy, the Environment and Water. Mr Fredericks, do you wish to make an opening statement?

**Mr Fredericks:** No, thank you.

**CHAIR:** Before we commence with corporate matters and general questions, I remind senators that this part of the program relates to matters concerning central departmental administration, such as building services, ICT, staffing levels and media procurement. Questions relating to individual policies and programs should be addressed to officials when the specific programs are considered in subsequent sessions. If we could please stick to that, I would be most grateful.

**Senator DUNIAM:** You looked at me when you said that!

**CHAIR:** I'm looking in general.

**Senator HUGHES:** He is our good one!

**CHAIR:** Yes. Senator Hughes, would you care to begin?

**Senator HUGHES:** We'll start with the well-behaved one.

**CHAIR:** Excellent. Senator Duniam.

**Senator DUNIAM:** Yes, let's start out how we expect to continue, shall we? Good morning, team. I'd like to go back to some questions around funding for the Environmental Defenders Office and Environmental Justice Australia, which I was hoping to ask during an element of the last estimates that was pushed over. I was told corporate was the place to talk about this issue, and it looks like it is. I'm wondering with regard to question on notice SQ22-000677, which you may have and which is around this very issue, Mr Hanlon. How were the funding amounts for these two organisations determined?

**Mr Hanlon:** The funding amounts were determined as part of an election commitment prior to the last election.

**Senator DUNIAM:** So does the department not have visibility about how it determined the dollar amount that was provided to these two organisations, other than it being a commitment made by the incoming government?

**Mr Hanlon:** No, we don't.

**Senator DUNIAM:** Minister, do you have any information about how those dollar values were determined?

**Senator McAllister:** These were commitments in the context of an election. We campaigned on these commitments through the course of the election, and we have asked the departments to implement them, as is ordinarily the case.

**Senator DUNIAM:** In terms of how the government arrived at these dollar amounts in order to make commitments, are you able to tell me how the government arrived at these dollar amounts?

**Senator McAllister:** I think it is widely understood that community legal services in general receive many more requests for support than they are able to meet, and that is true across a range of legal services. Whilst it was not a commitment I was directly involved in from opposition, I imagine that those were the things that were in the mind of the relevant shadow ministers at the time.

**Senator DUNIAM:** Perhaps, on notice, you might be able to find out for me, if it's to your agreement, how the government determined those dollar-value amounts that were subsequently taken to the election as commitments. Are you happy to do that?

**Senator McAllister:** I'll take it on notice.

**Senator DUNIAM:** That's great. I'll go to the actual agreements. Have the agreements with these organisations now been finalised, Mr Hanlon?

**Mr Hanlon:** The grant was launched on 21 March and closed on 19 April. As at 19 April, one of the organisations applied for the grant, which was the Environmental Defenders Office, and we're now working on the contract for that.

**Senator DUNIAM:** From the answer you have just given, Environmental Justice Australia aren't pursuing this funding.

**Mr Hanlon:** Correct.

**Senator DUNIAM:** So you're working through a process with the EDO. Is there a cap on the amount of money that was allocated as a result of the election commitment that's available to any one organisation, or is it



that the pool of money is there and, if there are less applicants, that pool gets divided in larger chunks to those who did apply?

**Mr Hanlon:** There were two specific amounts, \$8.2 million for the Environmental Defenders Office and \$1.2 million for Environmental Justice Australia. In terms of Environmental Justice Australia, we're working through what we do with the funding that's remaining and there are a couple of options open to us. We could redirect that funding elsewhere, or we can work through with Environmental Justice Australia their obligations and relaunch a grant program if we need to.

**Senator DUNIAM:** On the status of the arrangements with EDO, how far away from finalising a deed agreement are you at this point?

**Mr Hanlon:** We're expecting to make a payment this financial year, so by the end of June.

**Senator DUNIAM:** By the end of June, you expect to have finalised a first payment.

**Mr Hanlon:** That's what we're aiming for, yes.

**Senator DUNIAM:** Can you remind me what the funding profile was for the \$8.2 million? Is it all in one or is it over two?

**Mr Hanlon:** It's \$2 million this financial year and \$2 million next financial year, which is the '2023-24 financial year. It then goes out to \$2.1 million, and the last payment is \$2.1 million in the following financial year.

**Senator DUNIAM:** Are you able to step us through what probity requirements or arrangements are going to be in place in the funding agreement? I previously asked questions around concerns I hold about what the funding would be used for. Are you at this point able to provide us any detail of what arrangements are in place to protect the use of government funds for the purposes the minister mentioned before?

**Mr Hanlon:** Yes. The grant guidelines have items that can be included as part of the grant and they also have items that funding can't be used for, so excluded ineligible activities. The grant has been managed by the Business Grants Hub. Before payments are made, they need to be acquitted. There will be an annual report through the grants hub to determine whether the activities are eligible, and, if so, the funding will be paid.

**Senator DUNIAM:** Prior to funding being provided to the entity, they are to itemise what it is they intend to use the funding for through the grants hub and then funding is provided.

**Mr Hanlon:** And it be acquitted on an annual basis.

**Senator DUNIAM:** At the end of the funding period, each 12 months.

**Mr Hanlon:** Correct.

**Senator DUNIAM:** Are those guidelines publicly available?

**Mr Hanlon:** Yes, they are. They're on Grant Connect.

**Senator DUNIAM:** I can go and find those; that's fine. There is this process at the beginning, this is what we will use the funding for, and there is an acquittal process at the end of the 12-month period to make sure they have done what they said they'd do. What happens if evidence comes to light that the funding has been used in a way contrary to what was promised at the beginning of the process?

**Mr Hanlon:** There are a few available options. It could be that we withhold the next year's funding. We could seek repayment, or an extreme example would be to cancel the grant.

**Senator DUNIAM:** That will do me with regard to those particular issues. I turn now to the matter of the annual report for DCCEEW. As I understand it, one wasn't prepared for the financial year just gone. What's the reasoning behind that?

**Mr Hanlon:** Because the department was established as of 1 July 2022, the first annual report will start at 1 July 2022, which aligns with the financial year, and end at 30 June 2023.

**Mr Fredericks:** It's always retrospective. We're required to prepare a report and we're in the process of preparing a report for financial year '22-23, which is the first year of existence of DCCEEW.

**Senator DUNIAM:** When was DCCEEW created? Did you say 1 July?

**Mr Fredericks:** Yes, 1 July 2022.

**Senator DUNIAM:** Are all operations and entities within what is now DCCEEW for that period of time covered off in the former DAWE annual report? Is that correct?

**Mr Hanlon:** And Industry.

**Mr Fredericks:** Yes, both.

**Senator DUNIAM:** That's for the amalgam of energy and—

**Mr Hanlon:** Correct.

**Senator DUNIAM:** In order to compare annual reports—am I getting the wind-up?

**CHAIR:** Yes.

**Senator DUNIAM:** Were you listening intently to my question?

**CHAIR:** I was listening intently to your question, but equally providing you with a little wind-up at the same time.

**Senator DUNIAM:** How does one compare DAWE and Industry annual reports to DCCEEW? Is there some sort of standard arrangement around what information will be contained in those previous versions of what is an annual report for your entity now, and what is to come in the 2022-23 annual report?

**Mr Hanlon:** Specifically on the financial statements, or—

**Senator DUNIAM:** Yes.

**Mr Hanlon:** On the financial statements, what you will see is a zero opening balance for the prior year, but you will see a reconciliation of the transfer of funding through the machinery-of-government change. There will be a note, so you will be able to reconcile that funding.

**Senator DUNIAM:** In terms of staffing levels etcetera, there'll be an easy way to understand exactly how many staff are transferred from one agency to the new one, et cetera?

**Mr Hanlon:** I haven't done the note on that yet, but there will definitely be a reconciliation.

**Mr Fredericks:** Put it this way: obviously we would make sure in the annual report that we gave full transparency to the staffing contingency that we secured as a result of the MOG. We would be required to give a fair articulation of the staff that were MOGed to DCCEEW and, therefore, were a part of the original establishment of DCCEEW. So you're able to do some comparison with previous annual reports on that basis.

**Senator DUNIAM:** Alright. In terms of the ASL number in DCCEEW, it rises from 2,414 in 2022-23 to 3,895 in 2023-24, I understand. Can you step me through that increase in staffing levels?

**Mr Hanlon:** I certainly can. There are three components. The first thing to note is that the 2,414 figure is a part-year figure. Because most of the staff transferred in September, that's a 10-month figure, not 12-month. So the real comparison is 2,896 ASL on a full year to the 3,895. That's the first thing to note.

Then there are two components to the increase. The first component is through this budget. There was 644 ASL agreed in this budget, of which 511 are either new or reinstated. That is a terminating measure that was finishing at the end of the year, and that's been reinstated. And 133 are conversion of contractors. That's component two.

Component three is the increase in ASL that we received in the October budget being realised in the next financial year.

**Senator DUNIAM:** Thank you.

**Senator HANSON-YOUNG:** I want to go straight to the decision by the minister to approve a new coalmine. I'd like to know—

**CHAIR:** This is corporate.

**Senator HANSON-YOUNG:** I know. I'd like to know how many of these pending approvals are on the department's desk at the moment?

**Mr Fredericks:** Chair, I'm in your hands. That's not really a corporate matter.

**Senator HANSON-YOUNG:** Hang on a minute. It cuts across both the climate division and the environment minister. Previously, this was the section where these broader questions were answered. Is it because you need some more time to figure out the answer?

**Mr Fredericks:** No, I'm just trying to comply with the spirit of what the chair said earlier today. We have always been very open in trying to help, Senator, in these estimates.

**Senator HANSON-YOUNG:** You're well prepared.

**Mr Fredericks:** I'm in the chair's hands.

**CHAIR:** I think we will take those questions in the relevant section and just stick with the corporate.

**Senator HANSON-YOUNG:** Okay. Mr Fredericks, how much resourcing of the department is going into approving coalmines?

**Mr Fredericks:** To be fair, I think I need greater specificity on that question.

**Senator HANSON-YOUNG:** You didn't want to answer my specifics, so I'm going to the matter of department resourcing.

**Mr Fredericks:** I'm happy to give you as much detail as I can on resourcing. Is there a particular division of the department that you're interested in.

**Senator HANSON-YOUNG:** How much of the department's resources are currently being spent or quarantined for approving coalmines?

**Mr Fredericks:** I think the starting point of that is there is no sense in which a department like ours would quarantine resources to approve coalmines. At the end of the day, we have a division, the Environment Approvals Division, and they have the responsibility for all of the approvals that we do under the EPBC Act. Coalmining approvals, as you put it, are one part of their job along with an array of other approvals that they get, obviously, from all manner of proponents. I could certainly provide you information on the staffing at present of the Environment Approvals Division. They are the group that does all the approval activity, including those which relate to coalmines.

**Senator HANSON-YOUNG:** Are there any resources being directed from anywhere else in the department beyond the approvals division?

**Mr Fredericks:** Are you talking about on environmental approvals for coalmines?

**Senator HANSON-YOUNG:** I'm talking specifically about coalmines.

**Mr Fredericks:** There's no redirection, if you like, to coalmine approvals; there's simply resourcing of the environmental approvals division.

**Senator HANSON-YOUNG:** So no-one else across the climate change department more broadly has anything to do with helping the minister make a decision as to whether she approves or rejects a coalmine?

**Mr Fredericks:** That's a different question, Senator. Whenever the Environment Approvals Division does any approval process in relation to any project, then of course it would, from time-to-time, reach out and seek advice and assistance from other parts of the department. That's standard practice.

**Senator HANSON-YOUNG:** Which departments and which senior staff across the department were involved in giving advice in relation to the Isaac River coalmine?

**Mr Fredericks:** Now we are into that, but—

**Senator HANSON-YOUNG:** I think I just proved my point, Mr Fredericks, as to why this is a corporate question.

**Mr Fredericks:** I'm happy to take the questions. The answer to the question is: the delegated official in the Environment Approvals Division.

**Senator HANSON-YOUNG:** So there was only one person who fed into that advice to give the minister the green-light to approve a coalmine?

**Mr Fredericks:** No. Obviously the resources of the Environment Approvals Division would have been utilised in order to inform the decision-maker. Just to be clear, Senator, there's nothing special in that. That's just the standard process by which a department like ours goes about the process of advising itself and then, ultimately, the decision-maker, on any environmental approval decision on any project.

**Senator HANSON-YOUNG:** Yes. But I'm trying to understand how much of the department's resources are being spent giving the minister the advice that she should green-light a coalmine.

**Mr Fredericks:** The answer to your question is that the amount of resources that are being spent—

**Senator HANSON-YOUNG:** Or used.

**Mr Fredericks:** or used are those that are required for a department—

**Senator HANSON-YOUNG:** Okay, so how much was required to tell the minister to green-light the coalmine?

**Mr Fredericks:** I'm happy to take the detail of that answer on notice, but I'm just being up-front and honest with you. At the end of the day, I resource the Environment Approvals Division to do all of the suite of project consideration and approval activity that it needs to do, and at the end of the day they are the resources that are available to all approval processes, including those relating to coalmines. For us, as a regulator, we treat projects on their face, on a case-by-case basis, and they're resourced in order to do the proper job.

**CHAIR:** I think it really sits in outcome 2.

**Senator HANSON-YOUNG:** Well, does it? Or are there people from the various climate divisions that gave advice or from whom advice was sought—what does this do to rising emissions in this country and elsewhere, what does it mean for scope 3? Was any of that advice or information sought?

**Mr Fredericks:** On the specifics of the decision-making process, if that's what you're after, then that is absolutely something that I would need the relevant officials to be able to—

**Senator HANSON-YOUNG:** Is that something you consider, Mr Fredericks, when managing the broad department: if an approval is being sought for a coalmine that relevant people relating to the climate elements and climate change are actually involved in any consideration?

**Senator McAllister:** Senator Waters, I think that you have been provided with advice that the department draws on resources as required to provide a comprehensive picture of the minister's obligations under the law when she's receiving advice about a particular matter. That is true for a large-scale renewables project and it is true if it is a resources project. The department resources the minister to take the decision she is required to take under the law.

Your questioning this morning asked the secretary to break down resources in relation to one category of projects. My understanding, from the answers provided by the secretary to date, is that that is not information that is ordinarily collated and organised in that way. The secretary has indicated that he can give you information about the overall resourcing for environmental approvals. He's also indicated that, at the relevant point of the program, if there is a particular decision that you are interested in you can ask questions of the officials about the kind of advice that they sought, to provide a consolidated—

**Senator HANSON-YOUNG:** I'll be asking those questions in that section as well. What I'm interested in is, when the government of the day has set a target and is telling the Australian people that they want to reduce emissions, how on earth could the environment minister be given advice to say 'yes, go ahead,' to a coalmine?

**CHAIR:** Senator Hanson-Young, I will you ask to move on and ask those questions in outcome 2.

**Senator HANSON-YOUNG:** Mr Fredericks, has the minister been made aware of recent warnings by scientists that we could breach the 1.5-degree climate threshold as early as 2027?

**Mr Fredericks:** I don't think I can answer that question. I'll take that on notice. Again, this is this difficulty, Chair, of corporate. I mean, it's clearly a question for my colleagues from the climate change area.

**Senator HANSON-YOUNG:** But surely this is at the top of the department's priorities.

**CHAIR:** Senator Hanson-Young, there is a point here where the relevant officials need to be at the table to assist the secretary, because, while he may be across the totality of his brief, the detail of those pieces require those experts to be at the table. If you could stick with the corporate, that would be really good. You have another three minutes.

**Senator HANSON-YOUNG:** Mr Fredericks, I'll come back to a bunch of those questions. Could I go to the renaming of certain divisions and units in the department, as outlined in the budget. What's the purpose of all the name changes—is it to look like the government's doing something?

**Mr Fredericks:** The reality is that, obviously, as I said in answer to an earlier discussion, the Department of Climate Change, Energy, the Environment and Water was formed on 1 July 2022. As you know, Senator, it was formed from the transfer of some groups and divisions from the department of industry, science, energy and resources and the department of agriculture, water and the environment. We also received some branches from DFAT and some staffing from infrastructure. The reality is that, for some months, in many ways the department continued to exist as a structure based on the old structures of those old departments.

**Senator HANSON-YOUNG:** Okay. Maybe we can get to some specifics, Mr Fredericks, as we're running up against the clock. The words 'nature positive' have replaced a number of other phrases in the department's restructure. What is the definition that the department is using for 'nature positive'?

**Mr Fredericks:** Nature positive is an emphasis on giving priority not just to the prevention of the degradation of the environment but to attempting to improve the environment, to have a nature-positive outcome as a result of that which we do.

**Senator HANSON-YOUNG:** So, wherever we see the words 'nature positive' in the department's restructure, that's an improvement of environmental outcomes?

**Mr Fredericks:** What I was trying to say in answer to your first question, which I wasn't able to finish, was that in the restructure that we did—and that I felt compelled to do—as a department, we were seeking to achieve a number of aims. We wanted to make sure that our department was structured more effectively and more efficiently, so there was a lot of realignment of programs and branches so that there was greater consistency. But,

fundamentally, it is the case that we ensure our department and our structure is aligned to help reflect the priorities of the government, and I regard that as a proper thing to do. At the end of the day, it's clear that one of the priorities of this government is to focus on trying to achieve nature-positive outcomes. I think that's a good thing. To the extent that we're able to structure our department in order to maximise our capacity to deliver that outcome, that's what we're trying to do, and I think that's a good thing.

**Senator HANSON-YOUNG:** The assessment division is now called the Nature Positive Regulation division. Is that correct?

**Mr Fredericks:** Yes.

**Senator HANSON-YOUNG:** Could you please explain how the approval of the Isaac River coal mine is improving environmental outcomes?

**Mr Fredericks:** Again, I'm happy to take that on notice and come back to you when you ask those questions in the appropriate area.

**Senator HANSON-YOUNG:** This is the corporate division. I've just asked you why you've renamed the various different elements in the department. The assessment team is now called nature positive regulation. You say that's because it's approving things that improve the environment. How does the coalmine improve the environment?

**Mr Fredericks:** Again, as we've given evidence before over many estimates to you, those decisions are made on a case-by-case basis. The Isaac coalmine was made on a case-by-case basis, and we are very, very happy to give you as much evidence as we possibly can on that decision-making process and, as the chair keeps asking, in the appropriate outcome.

**CHAIR:** We're going to rotate the call now. Senator Cadell.

**Senator CADELL:** I have a question about the timetable for approvals being the same for renewable resources. Is there a benchmarking by size of project for the time it takes for projects to go through the approval process recommendation?

**Senator McAllister:** For clarity, I don't believe I did refer to a timetable.

**Senator CADELL:** I am asking about a timetable. You mentioned how renewables and resources may be the same.

**Senator McAllister:** I indicated that all projects require resources necessary to allow the minister to make a decision under the law.

**Senator CADELL:** One hundred per cent. Is there benchmarking the department does to look at the timetable on the average project from application to recommendation?

**Mr Fredericks:** I'm pausing because I know Ms Knudson can answer that question. Chair, again, in fairness to Senator Hanson-Young, if I'm consistent, that is a question that goes to the heart of approvals processes—

**Senator CADELL:** It's not the heart; it's a timetable on benchmarking on corporate performance. I'll give you the context, Madam Chair.

**CHAIR:** Thank you.

**Senator CADELL:** A business has come to us because under the Inflation Reduction Act they've been approached by America to take their business overseas, printing solar panels. The thing that impressed them the most wasn't necessarily the funding; it was the time taken for approvals. I think one state was offering three-month approvals on environmental grounds. Corporate wise, are we benchmarking? Are we looking at best practice? Are we looking at steps to improve the flow through and work management to get these things through to allow environmental projects to take place in Australia rather than overseas?

**Senator McAllister:** I do think that these are matters that should be dealt with elsewhere, but perhaps I can say this: you make the point that this may well be an appropriate metric at a corporate level for the organisation. One of the goals of the proposed reforms to our national environmental law is to improve and streamline the way that approvals are dealt with, and ultimately one would expect that would flow through to questions around corporate performance. But that law reform process is the subject of consultation ongoing, and detailed questions about that should be dealt when the environment part of the portfolio appears later in the program.

**Senator CADELL:** If I link that to the annual general report then, is there any benchmarking performance of departments in timetabling the annual report on timetables?

**Mr Fredericks:** The answer to that question is yes. That's an example where, in fairness, that is a corporate question.

**Mr Knudson:** There has been, for many years, reporting against our performance with respect to statutory time frames. Very specific time frames are laid out in the legislation—for example, the approval time frame is around 30 to 40 days, depending on the nature of the assessment. So that is laid out explicitly in our annual report.

**Senator CADELL:** How is that going?

**Mr Knudson:** It's going quite well. The assessment folk will be here in outcome 2, but I'm sure we're over 90 per cent on time, and, when we are late, we are late by a few days on average.

**CHAIR:** Senator Waters, five minutes.

**Senator WATERS:** Great. Can I start off with a governance question? Has the establishment of the Energy and Climate Change Ministerial Council superseded the bilateral energy and emissions reductions agreements governance processes?

**Mr Fredericks:** Again, I know this is not easy.

**Senator WATERS:** If 'superseded' is the wrong word, can you explain what's happened?

**Mr Fredericks:** It's not that; it's just this tricky business where I know the chair is keen to hold these questions to corporate, and I kind of feel like I'm becoming the traffic cop. Strictly that's a question that's in outcome 1, which is on at 10 o'clock, but—

**CHAIR:** We have enough hours for these questions with all the right people at the table. If we could just focus and get our corporate questions out of the way in the next 25 minutes, that would be very helpful.

**Senator WATERS:** Alright. I will ask that again in 25 minutes time.

**Mr Fredericks:** Thank you. I appreciate it.

**CHAIR:** Thank you.

**Senator WATERS:** I'm interested in the increase in administered assets and liabilities in Budget Paper No. 4. I think it's on page 44. It shows a \$6½ billion increase. Can you just run me through the description for that, please?

**Mr Fredericks:** I'll ask Mr Hanlon to do that.

**Mr Hanlon:** Can I just ask what you're referring to, Senator?

**Senator WATERS:** Budget Paper No. 4, page 44, the increase of \$6½ billion in what's dubbed 'administered assets and liabilities'. There's a table there.

**Mr Hanlon:** It's made up of a number of components. The largest equity injection we have is related to Snowy Hydro. As a number of our portfolio entities are corporate entities they can't receive administered funding, so it actually comes through the department. The majority of that would be for that. Then we have some other administered assets as well, the pass-through costs for the Clean Energy Regulator and the Clean Energy Finance Corporation. They're the majority of the funding.

**Senator WATERS:** That was in relation to equity, but I'm interested in assets and liabilities.

**Mr Hanlon:** That's the increases—the equity part of the assets.

**Senator WATERS:** So it's the CEFC and the CER.

**Mr Hanlon:** Yes.

**Senator WATERS:** So it's a throughput. But why is it so much bigger?

**Mr Hanlon:** That's a really good question. I'd have to take that on notice.

**Senator WATERS:** Okay. Thank you. I want to move now into the department's use of consultancies. The recent audit into consultancies shows that this department was the second-biggest department, behind Defence, for the use of consultants. Why is that?

**Senator McAllister:** Senator Waters, I think you and I sat in this room over a long period of time and asked questions of ministers from the previous coalition government about the approach they were taking to energy and climate change, and it was clear that it was not a very high priority for the government. In a range of areas where we would have hoped capacity and capability were being developed and deployed, that was not the case under the previous government. So the government is in the process of building up the capacity of this department. You can see that reflected in the resourcing allocated to the department. But there are some questions where we, in the interim, require specialist expertise, and that's reflected in some of the figures. But I think Ms McCulloch can take you through some of it.

**Ms McCulloch:** Senator Waters, you're referring to the audit report published recently by the public sector. Those figures are for 2021-22, not for 2022-23, and this department didn't exist in 2021-22, so there are no figures in that document that relate to this department.

**Senator WATERS:** Clearly the department does still exist. You've just added extras.

**Ms McCulloch:** Prior to July 2022 the elements of this department were in other portfolio agencies. I'm assuming that you're looking—

**Senator WATERS:** So you're saying that figure just totally doesn't correlate with the current department?

**Ms McCulloch:** Which figure are you looking at?

**Senator WATERS:** The fact that Environment was the second-biggest user of consultants after the defence department.

**Ms McCulloch:** I'm actually not aware of what figure you're referring to.

**Mr Hanlon:** I think what you're referring to is the former Department of Agriculture, Water and the Environment.

**Senator WATERS:** Look, I can't keep track of all of the different titles. I know you spend a lot on changing the letterhead every time, but I'm not going to go there. Whatever you used to be, the point remains that the environment section of whatever you're now conglomerated into was a very large—the second-largest—user of consultants. I am interested in why. The minister has referred to the massive staffing cuts that were wreaked under the previous regime, and you've indicated that you want to try and transition away from that, which is good. I'll come now to the whole point of the question. Are you still prepared to engage PwC as a consultant for your department?

**Mr Fredericks:** On PwC, the short answer to your question is that it would depend on the circumstances. Critically, those circumstances depend on the piece of work that PwC have agreed to do in relation to us. So that you're clear, I met with the Canberra leadership of PwC and, indeed, the Australian lead of their consultancy practice last week—I think that was on Thursday—because in light of media reports about the conduct of certain people within PwC in the past I wanted to make sure that I got an assurance from PwC that they are doing everything right in relation to our arrangements with them. I had a meeting to ask them to come back to me with a range of assurances.

One assurance that they were able to give me immediately is that the relevant partner and staff involved in those tax activities, that are now the subject of media, have done no work and do no work in any of the contracts that we have with PwC at the moment. I wanted to make sure that was the case. Secondly, what I've asked PwC to do and what they've agreed to do—and to be fair to them they have done it wanting to be as transparent as possible—is that they are going to come back to me with an assurance that in relation to any of the contracts that we have with PwC, all conflicts of interest have been appropriately measured, dealt with in terms of those obligations, all transparency has been observed, all of our contractual conditions have been observed.

In other words, I've asked PwC for, and they've agreed to give me, a range of assurances to ensure that they are complying with all of the conflicts in confidentiality requirements that we expect of PwC. They're going to come back to me with written advice about that within the next couple of weeks. That's why the answer to your question, as you originally asked it, was: it remains to be seen. I want to see how PwC come back to me in terms of the assurances I've sought.

**Senator WATERS:** What form are you expecting that assurance will take?

**Mr Fredericks:** In writing.

**Senator WATERS:** So you've essentially asked them to outline how they will comply with not only laws but also proper standards, rather than asking of them what it is that you want. You're sort of allowing them to design how it is that they will not break confidential information again.

**Mr Fredericks:** I wouldn't put it like that. Obviously contracts that we have with them contain all relevant confidentiality and conflict provisions, so I am going to hold them to account within those contractual terms. By the same token, I do have an expectation, and this was discussed, that they'll provide me with all necessary advice and assurance about their conduct more generally.

**Senator WATERS:** Can I have an indication of what proportion of your consultancy contracts are with PwC?

**Mr Fredericks:** It's very small. Mr Hanlon can help me. At the moment, I think we have potentially five or six.

**Mr Hanlon:** We have six contracts at the moment. That's since 1 July 2022.

**Mr Fredericks:** That's over the life of DCCEEW. In the 11 months that we've been in existence we've had six contracts with them.

**Mr Hanlon:** Six, at the moment. You will also see on AusTender some that transferred over as part of the machinery-of-government change.

**Senator WATERS:** How many in total?

**Mr Hanlon:** There are six that are active at the moment.

**Senator WATERS:** What's the total value of those contracts?

**Ms McCulloch:** The total contract value is \$2.6 million.

**Senator WATERS:** What's the average length of the contracts? Is that, for example, for one financial year or do they span longer than that?

**Mr Fredericks:** They probably vary.

**Mr Hanlon:** They do vary.

**Mr Fredericks:** We have different consultancies for different purposes, so some might be short and some might be long. We can take that on notice.

**Mr Hanlon:** If I could give an average, it'd be six months.

**Mr Fredericks:** We can take the detail of that on notice, if you like.

**Senator WATERS:** Has the scandal that they've recently been embroiled in caused the department to rethink how you engage with consultants, including with PwC in particular?

**Mr Fredericks:** That's a very good question. The reality is that I suspect it will. I want to see what PwC come back to me with, in terms of the assurances that they've provided. To your point about what that says about who's making the judgements about what's right and wrong—which is a fair point that you made before—I think that will allow us to potentially make a more mature judgement about whether there are any extra assurances that we need to contract for. I'm certainly open to that. I should note that my understanding is that both Treasury and the Department of Finance, as a result of this issue, have started to do some whole-of-government work. It's worth remembering that a lot of the work that firms like PwC do is as a result of their membership of whole-of-government panels to provide advice, which are run by Finance. A lot of the rules, requirements et cetera in relation to those engagements are run by Finance as well, and I think that in finance estimates you would be able to inquire to Finance as to the generality of those sorts of questions that you're asking me on a specific basis.

**Senator WATERS:** Yes, we will do that. My very last question—I promise—is this: will those written assurances that you're seeking be made public?

**Mr Fredericks:** I'll take that on notice.

**CHAIR:** Thank you. Senator Hughes.

**Senator HUGHES:** Just as we wrap up corporate, I was wondering if the department—well, hopefully wrapping up soon—can update us on what the budget is for the next financial year and what the budget has been for this current financial year for welcome to country ceremonies, smoking ceremonies or any of those sorts of programs.

**Mr Hanlon:** We haven't allocated a dedicated budget to that. We obviously use people for that, but we haven't set aside a specific budget.

**Senator HUGHES:** So where does that come from?

**Mr Hanlon:** It's usually paid out of my division, to be honest, but it will depend. If it's done locally, it may come out of the division that has done that, but when it's central it's usually paid for by me.

**Senator HUGHES:** What expenditure has been made?

**Mr Hanlon:** I'd have to take that on notice.

**Mr Fredericks:** We understand the question. You're interested in expenditure.

**Senator HUGHES:** What I want to know is if there was a specific budget for it. I would also like to know what the average cost is per ceremony.

**Mr Fredericks:** I think we can tell you now that there would be no budget for it. We'll come back to you on notice with what the specific costs we've incurred have been.

**Senator HUGHES:** And how many that has incorporated—that would be very helpful.

**Mr Hanlon:** Yes.



**Senator HUGHES:** I'll leave that there.

**CHAIR:** Thank you.

**Senator HANSON-YOUNG:** I've got some final questions for corporate.

**CHAIR:** Sure. Senator Duniam?

**Senator DUNIAM:** Okay, thank you.

**Senator HANSON-YOUNG:** You can go first!

**Senator DUNIAM:** Is that okay?

**Senator HANSON-YOUNG:** Yes, that's fine.

**Senator HUGHES:** I love this collegiality!

**CHAIR:** I'm trying to be fair and balanced.

**Senator DUNIAM:** I will seek not to detain the committee. Mr Hanlon, with regard to those staffing increases, the numbers you talked about before, are you able to, on notice, if it's not already publicly available, provide to me the APS level for the extra staffing provision—the 644 and the 133—as best you can?

**Mr Fredericks:** Can I assist on that one? We'll take it on notice and we'll do our best. But the truth is, as you know, it doesn't quite work like that. We're provisioned with an ASL number, as a consequence of budget decisions.

**Senator DUNIAM:** So it's a dollar value.

**Mr Fredericks:** Of course they're costed on the basis of an understanding, but we'll do our best to give you that sort of breakdown.

**Mr Hanlon:** I can give you what we costed, but it won't necessarily be how we recruit.

**Senator DUNIAM:** That's fine. What you've costed it at is all we can go with for now. I understand things change when looking for expertise. I'll quickly go to the Chinese surveillance devices matter. Is that okay to ask here?

**Mr Fredericks:** Yes.

**Senator DUNIAM:** As I understand it, there was one agency within this portfolio that decided that these devices were low risk. Which agency was that, within the portfolio?

**Mr Fredericks:** That was the Sydney Harbour Federation Trust.

**Mr Hanlon:** They are removing the device.

**Senator DUNIAM:** They are removing it as we speak?

**Mr Hanlon:** Correct. When the question on notice was answered, they hadn't made that decision yet, because the camera was isolated; it's not touching the system. But, since that, they have advised us that they will be removing the device.

**Senator DUNIAM:** If it is still low risk, is it just as a result of the whole-of-government decision to remove all devices of either brand name, or was it because it was later deemed to be a high risk independently of that direction?

**Mr Hanlon:** I think it's probably a bit of a combination of both. It was more that, at the time, because that came out really close to estimates, they had to make an assessment. They took a bit of time to make that assessment. They then made that assessment and decided to remove it. That's the way I would describe it.

**Senator DUNIAM:** Has the removal been completed, or is that something you might need to take on notice?

**Mr Hanlon:** Across the portfolio we expect to have all of those removed by the third quarter of this calendar year.

**Senator DUNIAM:** I have three more areas to go to.

**CHAIR:** You have five minutes.

**Senator DUNIAM:** What if I'm not done in five?

**CHAIR:** You can put them on notice.

**Senator DUNIAM:** I don't know if I can. There is one I will ask to be taken on notice. Ms McCulloch, I think in the answer to a question you took on notice last time, you talked about an integrity inbox and integrity hot line. Post the Russell review—and we've discussed the Nash review—could you provide on notice the number of complaints by month received from 1 July 2019 to date?

**Ms McCulloch:** Since 2019?

**Senator DUNIAM:** Since 1 July 2019.

**Ms McCulloch:** I'll have to take that on notice.

**Senator DUNIAM:** That's fine. That's all I can ask for there. That's one of three done. In regard to question on notice SQ22-000619 relating to expenditure on ICT and associated equipment for the minister, that answer talked about \$154,337.02 spent on ICT. Has there been any increase on that amount since that point in time?

**Mr Hanlon:** We haven't paid for any additional ICT, but we are in the process of fitting out the ministerial office to change over the IT technology from department of industry to department of agriculture, who are our supplier of ICT infrastructure. That number will increase, but it won't increase by a huge amount.

**Senator DUNIAM:** On notice then, could you let me know how much more is spent? If you could, on notice, in the interests of time, explain to me that 'Noodle Nation' department of ag from industry transfer.

**Mr Hanlon:** Can do.

**Senator DUNIAM:** That would be helpful. I want to go to my final set of questions which are close to my heart—SQ23-000649, relating to the Antarctic and Science Precinct. This was a corporate question. I asked about what interaction this agency had had with this ethereal branch within the Department of Finance: the property management and projects branch. It was stated in answer to this question that, from the middle of 2022, some work was sought from this project and property management branch within Finance to provide strategic advice and review of the detailed business case around the Antarctic and Science Precinct. It says it's still ongoing. Is it the case that the work is still ongoing?

**Mr Sullivan:** Yes, the work is still ongoing. I think we've gone through this before. The announcement to move to a revised master plan for Macquarie Point no doubt will have some impact on the previous Antarctic and Science Precinct plans. That's because of the overlap between some of the facilities that were envisaged in the original Antarctic and Science Precinct then being delivered through the new sports, arts, cultural precinct or stadium, including conference facilities et cetera. We are working off the previous business planning for the Antarctic and Science Precinct, but then we are now engaged with various Tasmanian entities, including the city council and various Tasmanian departments, as well as our Commonwealth colleagues. As we work through that master planning process for Macquarie Point, that will likely have impacts on the Antarctic and Science Precinct business planning. We'll work through that in the context of the broader business planning for Macquarie Point.

**Senator DUNIAM:** I understand there's going to be a refreshed plan, as the Prime Minister and others stated on 29 April. I accept what you're saying around the work that now needs to be done—because we're almost at ground zero again. In the answer here, it says that no costs have been paid to the Department of Finance for what is nearly a year's worth of work. Can I understand that?

**Mr Sullivan:** I think work was commissioned, and I'll have to take the details of that on notice in terms of the cost for the business planning that has already been done. We're working in collaboration with other Commonwealth partners, so it's not a costing exercise—it's contributing to that process of how we come together not only in the Commonwealth but also with our state and local government partners.

**Senator DUNIAM:** My question was specifically around this branch and what interaction this agency has had. It's stated here that this agency sought the support of this branch not as part of a collaboration but as a specific job. Other answers I've received from other agencies have detailed a cost for the work that this branch has done for whatever agency it might be—the department of agriculture, for example. Your answer is that no costs have been paid; are there amounts outstanding?

**Mr Sullivan:** No. We've been working in collaboration with, as is my understanding—

**Senator DUNIAM:** So there's no billing arrangement for DCCEEW to Finance, but other agencies have different arrangements.

**Mr Sullivan:** I think we work through that on a case-by-case basis.

**Senator DUNIAM:** Who was in receipt of the business case in the end? The finalised business case that is still ongoing—who was in receipt of that work?

**Mr Sullivan:** At that time, the previous Department of Agriculture, Water and the Environment were the business owners of that. As we now move forward, the responsibility with respect to a future Antarctic and Science Precinct still rests—in terms of the Commonwealth, where it remains at the moment—with DCCEEW, but in partnership with CSIRO as well as the department of infrastructure and the Department of Finance. It is still a collaborative effort across government and will require a whole-of-government consideration as we work through the new master planning from Macquarie Point.

**Senator DUNIAM:** As I round this out, is the arrangement purely between this branch of the Department of Finance and this agency, or is it part of a broader group? Perhaps you could provide on notice a little more detail on the specific strategic advice and review work that has been done on this detailed business case. I'm interested in the work of this agency. This is a large department which has a huge amount of expertise, particularly when it comes to things like the Antarctic and Science Precinct, so I'm interested in what you don't have within your agency that has required the input of the Department of Finance to do the work that they've done now for nearly a year at zero cost.

**Mr Sullivan:** You're completely correct that we have an amazing array of talent across the department, including inside the Antarctic division. Others are more specialised with respect to the delivery and planning of infrastructure, and that's why we work collaboratively with the department of infrastructure as well as the Department of Finance. I'll take any further details on notice.

**Senator DUNIAM:** Yes, please. I might provide some written questions on notice.

**CHAIR:** Can I check that no one on the committee has any problems with the media taking photos?

**Senator DUNIAM:** No, I think we're okay.

**Senator HANSON-YOUNG:** No.

**Senator DUNIAM:** What would you have done if she said yes?

**CHAIR:** I would have asked this gentleman to leave the room.

**Senator HANSON-YOUNG:** Mr Fredericks, following on from the questions my colleagues asked about CWP and the scandal that has engulfed the whole of government—as you point out, it's not just the finance department or individual departments—I'm interested in whether this has created a sense to look at other potential conflicts of interest.

**Mr Fredericks:** The answer to your question is yes: in time, we'll get to that for the reasons that you're implying. There are a couple of things to be said. First, in fairness, I do want to focus and make sure that PwC do this work that we've asked them to do and that they have agreed to do so we can get to the bottom of any potential issues for this department. Now that I'm aware that Treasury and Finance are working on some whole-of-government work, including in relation to panels that PwC and others will sit on, in the ordinary course I would want to see what Finance comes forward with on that. I suspect that, for the reasons you're asking the question, that would be an issue which surely would be looked at.

Second, from the whole-of-government perspective, I'd like to make sure that I gave Finance an opportunity to take the lead at the whole-of-government level, particularly on their panels, to see what additional requirements, if any, they might look at, and I would look to replicate those.

Third, of course, in our own world, once we understand what advice Finance might provide, we would look to replicate that and replicate it strongly.

**Senator HANSON-YOUNG:** I'm particularly interested in some questions about the conflict of interest of the chair of the Climate Change Authority, Mr King. You're aware of some of those concerns?

**Mr Fredericks:** I've seen those reports in the paper and I know that a letter has been referenced about that as well. Again, it's up to you, Chair; we're almost in climate change, so I don't think it matters. It's probably not a corporate question, but, in fairness, we're almost in climate change estimates, so we could probably take this.

**CHAIR:** We are and we would move across, but Senator Rice has questions in corporate.

**Senator HANSON-YOUNG:** Just to be clear: I do want to get into this CCA conflict issue, but I'm prompting you across the department. Are there other agencies or panels beyond PwC that you are starting to turn your mind to as to whether a conflict-of-interest register needs to be updated or a review needs to be undertaken to make sure we're not just letting things slide?

**Mr Fredericks:** Yes, that's a very fair question. Three things to be said on that. Firstly, in relation to the consultancy class, like PwC and others, I think I answered that question. There's a logical process that we're going through. Secondly, in relation to our department ourselves, because we're a new department, we're actually in the process of updating our own conflict-of-interest policies and procedures, so we are actively looking at that now. Ms McCulloch can correct me, but I think we're close to finalising DCCEE's conflict-of-interest policy. For ourselves, that will deal with all of those issues. Thirdly, I think it's known that a review is being done across the whole of government about boards. There is a whole-of-government review process in relation to board appointments, and the sorts of issues that you're discussing were picked up in that as well. Board issues and the appropriate processes and procedures for management of conflicts of interest will be dealt with, as I understand, in that whole-of-government review of boards. We'll be part of that.

**Senator HANSON-YOUNG:** Okay. From a secretary's perspective—maybe this is a question for the minister more than you—I'm interested in whether there has been a meeting of all the department secretaries to say, 'This is something we're going to have to deal with, and it is a matter of priority'?

**Mr Fredericks:** There hasn't been a meeting as such, but there's just no doubt that you're asking the questions for the right reason. You see that PwC issue, and we're all acting as a consequence. That's why I wanted to bring PwC in, talk to them about it and seek those assurances for the reasons that you say. In my department's dealings with PwC and all consultancies, we have to have the strongest possible understanding that the information that we're providing, which is public—the asset ultimately is the public—is not being used for a conflicted purpose, is not being used wrong in any way, shape or form. In my respect, I support what you're saying completely and do intend to lean into it strongly both in relation to our own contracting and in relation to our own operations. To be fair, we have to apply the same standards to ourselves.

In relation to boards more generally, in fairness, there is this whole-of-government review happening. I'm not sure of the time; it would be close. I think that shows the level of concern that already existed even in advance of the PwC outcome.

**Senator HANSON-YOUNG:** Before I hand over to my colleague, I'll ask this: with those existing contracts that the department has with PwC, are you confident that, when you've pulled them into a meeting to talk to them, they were actually telling you the truth?

**Mr Fredericks:** Well, that's never an easy question. At the end of the day, I have to say that in the meeting I had with them they were very forward-leaning. They apologised and went out of their way to make sure that they understood my requirements, and they dealt with me respectfully and credibly as a consequence. The reality is that I want to see what they come back with in writing. Obviously, I'll look at that and interrogate that, and hopefully that will give me the sort of satisfaction that you would expect me to get.

**CHAIR:** We'll go to Senator Hughes.

**Senator HUGHES:** I have one question, if I may, before we finish corporate. How many people within DCCEEW are employed in property management services or similar things related to DCCEEW assets?

**Mr Hanlon:** It's in my branch and I'm just trying to think of the number. I think it's around 20; that's for property, and we have protective security in the branch as well. I can confirm the number, but it's somewhere around 20 to 30 people all-up.

**Senator HUGHES:** With regard to the new positions, how many of them are going to be regionally based?

**Mr Hanlon:** We have people in Kingston, Hobart. Most of the staff are Canberra based, but our recruitment is national. We recruit across the country, and it just depends on the skill set.

**Mr Fredericks:** Can I emphasise that, Senator, because it's a legitimate question. I've certainly had this conversation with your colleagues before. My personal view—which I intend to implement as the secretary of this department—is that I want to recruit across Australia, particularly in rural and regional Australia where I can and where there's talent there. We've set up offices in each of the capital cities.

**Senator HUGHES:** So regional offices—as opposed to recruiting them to Canberra?

**Mr Fredericks:** Correct. Well, there a couple of things. Firstly, we advertise Australia wide, and we do that on the basis that there'll be opportunities for people to stay where they live. Secondly, we have set up offices in each capital city to give us a hub for each state, if you like. But, because of our capacity to now allow people to work remotely, we absolutely have the opportunity to give people who want to work in this department the opportunity to work in this department from regional Australia. I'm very committed to that because, at the end of the day, the reality is that the days of requiring everybody to come to Canberra to work are coming to an end. I have a responsibility to have a department that's a national department. I want to employ the best people wherever they are. It's not automatic that we can do that, but we strive to maximise those opportunities where we can.

**Senator HUGHES:** We might keep a watching brief on that. Maybe next time we might ask you for actual numbers, as opposed to general.

**Mr Fredericks:** That's completely fine.

**Mr Hanlon:** So 28 per cent of staff are outside of the ACT, and that number's growing.

**Senator HUGHES:** If you can take on notice as well any further information you've got around the property services or assets—

**Mr Hanlon:** Yes—can do.

**Senator HUGHES:** That'd be great. Thank you.

**CHAIR:** Senator Rice.

**Senator RICE:** I want to go to the \$51 million that was announced in the budget for the establishment of Environment Information Australia. Is Environment Information Australia what was, in the Nature Positive Plan, described as the data division?

**Mr Fredericks:** Chair, are we still in corporate estimates?

**CHAIR:** You said you had corporate questions?

**Senator RICE:** Yes.

**Mr Fredericks:** Again, I'm in an uncomfortable position, Senator.

**Senator RICE:** I just want to establish what exactly Environment Information Australia is and how it relates to what was, in the Nature Positive Plan, described as the data division.

**CHAIR:** I imagine that's probably better served—

**Mr Fredericks:** In outcome 2.

**CHAIR:** in outcome 2.

**Mr Fredericks:** When we talk about all the environmental work—tomorrow.

**Senator RICE:** In the session so far, Senator Rice, we've been deferring everyone's questions that don't directly relate to corporate to the next session.

**Senator HANSON-YOUNG:** Rightly or wrongly!

**Mr Fredericks:** And not without some difficulty—but we're trying to do it in good faith, the whole of business corporate.

**Senator RICE:** If it's clearly within outcome 2, I will come back in outcome 2.

**Mr Fredericks:** It is in outcome 2. Thank you, I appreciate that.

**Senator RICE:** That means that we're finished.

**CHAIR:** Fantastic. Senator Payman has one question, and then we will wrap up.

**Senator PAYMAN:** Thank you. Mr Fredericks, following on from contract questions, the department has an increase in the average staffing level for 2023-24. Is there an intent to reduce dependence on labour hire and consultancies?

**Mr Fredericks:** Yes, there is, particularly on consultancies. In fact, as Mr Hanlon advised in response to an earlier question in relation to the last budget, where the department got an increase in ASL of 644, 138 of those ASL positions are specifically in order to convert contractors to public servants. The number in this budget is 138; I don't think Mr Hanlon gave that number in the October budget.

**Mr Hanlon:** No. Just to correct, it's 133 for next financial year. That rises up to 451 by 2026-27.

**Mr Fredericks:** That's the crucial number. By 2026-27, that number of conversions from contractors to ASL is upwards of 400.

**Senator PAYMAN:** Thank you. That's all from me, Chair.

**CHAIR:** That concludes the examination of corporate matters for the Department of Climate Change, Energy, the Environment and Water.

[10:11]

**CHAIR:** I now call officers from the department in relation to outcome 1, program 1.1, Reduce Australia's greenhouse gas emissions. We will start with Senator Hanson-Young.

**Senator HANSON-YOUNG:** I might firstly go back to the questions I was asking about the potential conflicts of interest within the Climate Change Authority and the chair, Mr Grant King. Are you aware that a number of concerns have been raised in relation to this potential conflict?

**Mr Fredericks:** I'm aware of the letter that has been provided by the Australia Institute to the minister.

**Senator HANSON-YOUNG:** My understanding is that the minister has deferred the questions and concerns to the department. Is this something that you are now investigating or reviewing?

**Ms Evans:** We received a copy of the letter just late last week, and there are some questions raised in there that go to an interpretation of the act, so we will get some advice on the accuracy of those views and then take a decision about how to advise the minister.

**Senator HANSON-YOUNG:** Is it correct that Mr King had previously notified a conflict of interest himself, in relation to being the chair of GreenCollar?

**Ms Evans:** To my recollection, although I haven't had time to go back and triple-check, we were aware of all of those appointments that are listed in the letter from the Australia Institute at the time that the previous government considered his appointment to the Climate Change Authority.

**Senator HANSON-YOUNG:** So these were all potential conflicts that were known prior to him being given the chair position at the Climate Change Authority? Sorry; I just want to be clear about the time frame.

**Ms Evans:** That is my understanding, but I would want to double-check the exact timing of each of those appointments to make sure my recollection isn't inaccurate. My recollection is we were aware of those main appointments at the time he was originally appointed.

**Senator HANSON-YOUNG:** So that I can understand, what role does the Climate Change Authority have in relation to matters such as offsets or carbon credits?

**Ms Evans:** One thing that's really important to understand is that the Climate Change Authority does not have any decision-making roles. Its role is very much advisory to the government, and it can advise on a range of issues, including the acts. Its statutory responsibilities include the responsibility to have a look at the Carbon Credits (Carbon Farming Initiative) Act 2011 and all of the different acts that affect the management of offsets and so on. Those would clearly be within the remit of the kinds of things that the Climate Change Authority can advise on.

**Senator HANSON-YOUNG:** Yes, you're right to point out that it's an advisory role, not a decision-making role. PwC didn't make decisions on behalf of government either; they just advised. So, to be clear, advice is still a potential space where conflict can arise, isn't it?

**Ms Evans:** I want to make clear that the letter we've received from the Australia Institute doesn't make any actual allegations about any impropriety. I'm not comfortable with your comparison to the PwC situation, but, in a general sense, of course conflicts of interest are an issue that need to be considered in all aspects of interaction with the government.

**Senator HANSON-YOUNG:** So, to be clear, you're aware of these concerns being raised and you're going to review the concerns that have been raised. Have you been asked by the minister to respond? Or is this something that you'll just do in house, and if you've got no concerns there won't be any publication or reply either to the Australia Institute or to members of the Australian press?

**Ms Evans:** It's fairly standard practice for us to simply craft a response to a letter of this nature that has come in to the minister. We will have a look at the issues that were raised, we'll provide advice to the minister and we will offer a potential response, and it will be up to him as to whether or not he chooses to send that.

**Mr Fredericks:** Can I add one thing, to emphasise the point that Ms Evans made earlier. Looking at the terms of that letter, it is fundamentally about the construction and interpretation of the CCA Act and the PGPA Act. We'll end up getting legal advice on that, I suspect, to make sure that we can give the best possible legal advice, because it is a legally structured argument. So we'll have a crack at getting legal advice on that.

**Senator HANSON-YOUNG:** I'd like to know what the findings of that legal advice are, if I can put that question broadly, on notice, Mr Fredericks.

**Mr Fredericks:** We'll take it on notice and we'll do the best we can.

**Senator HANSON-YOUNG:** Thank you. Could I go back to the questions I was asking in the corporate section in relation to the environment minister's recent approval of the Isaac River coalmine. I know there are going to be questions in the approvals section, but I'm interested as to how this intersects with and relates to our broader climate change obligations and the targets as outlined and accepted by the government. Ms Evans, was there anybody within the department who gave advice to the environment minister that this coalmine should be approved?

**Ms Evans:** That's a very broad question, which is probably one for my colleagues in the environment area and the approvals and assessment area. What we—

**Senator HANSON-YOUNG:** Maybe I'm not being clear. I will try and be clear. I know the assessment department—they're now called the Nature Positive Regulation team—make the decision and gather the advice. What I'm interested in is if there was any advice or information that was gained from the climate change elements of the broader department before that decision was made.

**Ms Evans:** There's a range of information that I'm sure the assessment team would have drawn on, but I will ask Ms Rowley to comment more specifically.

**Ms Rowley:** I can't speak to the specific case of the Isaac River mine, but I can explain that, in many cases, the emissions reduction division provides factual information to help inform the development of advice on EPBC decisions, Environment Protection and Biodiversity Conservation Act decisions, including with respect to the emissions and the outlook for emissions from fossil fuel projects. So it's factual information that is shared with our environment colleagues, who then incorporate that into their advice to the minister.

**Senator HANSON-YOUNG:** So the emissions reduction division in general terms does provide this advice and information time to time. Can you tell me whether any advice or information was sought or given in relation to the Isaac River coalmine?

**Ms Rowley:** I don't have details of that project specifically to hand. We could take it on notice, if required.

**Senator HANSON-YOUNG:** If you could take that on notice. I mean, we're here for a day and a-half, two days.

**Mr Fredericks:** To help you on that, we'll take it on notice so the environmental assessment team can answer that tomorrow in outcome 2 estimates.

**Senator HANSON-YOUNG:** Of course, if you have the information earlier, we could have that as well, Mr Fredericks. We don't have to always wait, do we? Ms Rowley, are there any other projects that are currently being assessed by the assessments division that the emissions reduction division is advising on?

**Ms Rowley:** I'm sorry, I would need to take that on notice. In the decisions currently under consideration by our environmental approvals colleagues, they could probably speak to that tomorrow. With respect to the ones we are currently providing factual information on, I would need to take that on notice.

**Senator HANSON-YOUNG:** Could you take that on notice? Mr Fredericks, as the overarching boss in the room here, could you make sure that happens tomorrow?

**Mr Fredericks:** Yes, we'll see if we can address that tomorrow.

**CHAIR:** Do you want to maybe take a break there and we can rotate back to you?

**Senator HANSON-YOUNG:** Yes, sure.

**Senator HUGHES:** If I can just refer you back to a speech that was given by Minister Bowen on 24 September 2022 at the Centre for Strategic and International Studies in Washington DC, Mr Bowen said that Australia would need to install 22,000 500-watt solar panels every day and 40 wind turbines every month to reach its 82 per cent renewable target by 2030. It's been 241 days since Minister Bowen made this announcement. This means we should have had 5,302,000 solar panels installed and more than 320 wind turbines built. Could you, please, update us on how many have actually been delivered in that time?

**Senator McAllister:** I'll get Mr Duggan to answer some of your questions. I will note, Chair, that these matters are actually in the energy part of the portfolio, but the secretary and I have just had a discussion about the approach we might take to this. With the committee's agreement and if it's acceptable to you and others, we would be happy to answer questions both in relation to climate change and adaptation, and energy in the period—

**Senator HUGHES:** There is quite a bit of cross-over.

**Mr Fredericks:** That's how we see it too. I always keep the relevant staff here. So Mr Duggan can—

**Senator McAllister:** Perhaps I can indicate also that Minister Bowen is well appraised of the channels and the challenging and ambitious nature of getting to that 82 per cent target and it is in that context that—

**Senator HUGHES:** I wanted to see how on track we are. We have actual numbers, so we can compare whether we have delivered anywhere near them.

**Senator McAllister:** I'll ask Mr Duggan.

**Mr Duggan:** To the basic tenor of your question, absolutely there needs to be a huge acceleration in renewable energy investment. I don't have the updated figures for what has been added by way of renewable energy capacity since Minister Bowen gave that speech. I would need to take the precise figures on notice.

**Senator HUGHES:** Is there any monitoring of how many per month, how many per quarter, have been installed, how many wind turbines, just so that we can get some sense of how we're tracking?

**Mr Duggan:** Yes, we are watching very closely. Basically, we rely very much on the monitoring and tracking of the market bodies in this regard, so the Australian Energy Market Operator pays close attention. Typically, the key document that they use to update the public on that is an annual document through their updates to the integrated system plan. We are currently in the process of doing that. I have information as to generation capacity as at the last time they produced that report last year, but I don't have sort of day-by-day, week-by-week information in front of me.

**Senator HUGHES:** I mean, if we're not on track, that number of 22,000 per day is going to significantly increase as we go forward, because it was 214 days ago that we needed 22,000 per day. If you can take that on notice, to gather any information you have with regards to where we are. Obviously make sure that this committee receives a copy once that report is finalised so we can see what number have actually been installed. With regards to the solar panels and their production, what oversight is put in place as to the origin of those solar panels? I'm specifically referring to whether there's been any consideration that the majority of solar panels are coming out of China, confirming that Uyghur slave labour has not been used in their production?

**Mr Duggan:** Yes, that's a question that sits across both this portfolio and the industry portfolio. Your point is right—a lot of Australia's importation of solar panels is from China presently. You would also be aware, and there was an announcement over the weekend from the Prime Minister with President Biden, of the government's ambition to broaden supply chains, including clean energy technologies, including solar panels. At the moment, this department is not monitoring or tracking the proportion of solar panels that are coming from different overseas markets but it's an area of broad interest with the intention and the very good, as you point to, social reasons, but also very good economic reasons for having more diversity and supply of solar panels.

**Senator HUGHES:** I'm interested to know whether DCCEEW has any focus or lens put over supply when it comes to modern slavery, because there are broad accusations coming out of China that it is Uyghur children and Uyghur slaves being used to produce these. I just want to get some sense, some clarity, of whether the great moral triangle is making receiving solar panels, regardless of whether they're created by modern slavery, more important than having an oversight of modern slavery and not accepting those solar panels?

**Mr Duggan:** I would say, as a department, we are absolutely 100 per cent concerned by any use of slave labour to produce materials—

**Senator HUGHES:** What officially is in place over that? What sort of lens is put over it? What official? I mean, everyone is concerned about it.

**Mr Duggan:** Yes.

**Senator HUGHES:** It's lovely we have now got an ambition with the US, but the reality is the majority of solar panels come out of China, and there's broad belief that they come out of modern slavery by using the Uyghurs and Uyghur children, in particular. What is the department doing to ensure that they are not the solar panels being imported into this country?

**Mr Fredericks:** Just to assist on that, it's a proper issue you're raising. It is not without its complexities, as you would appreciate. In many ways, part of the answer to that question lies with the Department of Foreign Affairs and Trade. The Australian government in relation to those labour issues, particularly as they might occur in China, would really follow the lead and make sure that DFAT led on those sorts of considerations. I would like the opportunity to refer to my DFAT colleagues in relation to that. Secondly, just to emphasise the point that Mr Duggan made earlier, the department of industry can also have responsibilities in that area as well. The reality is that it's complex, but I think the answer to your question is that it's a whole-of-government activity that's led by DFAT. I'd like to take on notice the opportunity to come back to you sensibly with an informed view from DFAT and industry about what government is doing as a whole.

**Senator HUGHES:** That would be very helpful, because there is crossover between lots of portfolios, and, inconveniently, they're all on at the same time—it's difficult to be in multiple places at the same time.

I want to make one quick point that we don't have to go to now: in the last estimates, thanks to some questions by Senator Hanson-Young, we established that the health department wrote to interfere with the Climate Active tick program to remove British American Tobacco's environmental tick. That's quite an intervention across departments. It would be interesting to compare the departmental working collaboration oversight when we're talking about modern slavery over here but an automatic reaction as soon as the Department of Health invoke WHO. We need to ensure that, when there are competing concerns over departments, they're being worked through appropriately and we're not racing towards solar panels that are being created by children and slaves.

**Mr Fredericks:** I fully understand the tenor of that question and the legitimacy of you asking it. We will do some work across departments and answer that question on notice as best we can.

**Senator McAllister:** I think your questioning indicates that you're aware of this but, to assist: you'll understand that the act is currently undergoing a statutory review. The obligations under the act accrue to businesses to provide a measure of transparency about their own supply chains. As you indicated, questions around that act will probably need to be dealt with in another committee.

**Senator HUGHES:** We don't want to put in place a policy over here that's going to be boosted.



**Senator McAllister:** I take issue with the characterisation of interference in Climate Active. I think when you review the correspondence that was provided as part of the QON—

**Senator HUGHES:** I have it, that's why we can come back to it.

**Senator McAllister:** and you have that conversation, it's quite clear that the Department of Health was writing to provide information about existing policy frameworks of government and the way that our department might interact with those. Ms Evans has some additional information.

**Ms Evans:** I can say from my exposure to the way that decisions are made—for example, in the Australian Renewable Energy Agency—that those considerations of modern slavery are absolutely there in terms of the supply chains that they look at for solar panels, electrolysers and any of the other things. We will take on notice whether this is also the case for the grants that are delivered through the business grants hub and so on. That's at a practical level for the Commonwealth.

The other thing I want to draw attention to is that these are exactly the kinds of issues that are raised through the Quad Clean Energy Supply Chains principles that have just been agreed. All of the countries there are saying that these kinds of considerations are things we all need to turn our minds to as we look at the supply chains for renewable energy going forward.

**Senator HUGHES:** The crux of the issue is: are we racing too fast towards solar panels when we have concerns about the supply chain and how they're being generated? Should we allow the time for manufacturing to develop that isn't using child labour or slave labour, as opposed to turning a bit of a moral blind eye as we chase a target where supply chains aren't in place?

**Senator McAllister:** I've given an indication about the work that is under way in terms of the statutory review of the Modern Slavery Act. The officials have also indicated that this is an area of focus for us both in our domestic work on our manufacturing capability and in our international partnerships in relation to supply chains. I'm not sure that we can add any further to your questions.

#### **Proceedings suspended from 10:34 to 10:50**

**CHAIR:** We will now continue on with program 1.1.

**Senator ALLMAN-PAYNE:** In the federal budget, the Commonwealth government allocated funding towards a new net zero authority. I want you to clarify if or how this might interact with any existing work of the department towards the energy transition?

**Senator McAllister:** Yes, you're right. It is a significant decision and it reflects the understanding that the scale of the economic transition is important, nationally significant, but also has some regional geographic dimensions as well. The work of the authority is not only intended to interact with some of the work that's already happening with states and territories but also to support the overall transition of the economy and ensure that we're capturing the opportunities. I think Ms Evans is in a position to provide a little more information about what's anticipated in terms of other work that is happening within the department and interactions.

**Ms Evans:** Perhaps specifically, when the net zero authority was announced, there was a particular reference to the industry transformation stream that will be part of the Powering the Regions Fund, which is in our portfolio. The expectation is that the authority will be able to help the communities and so on understand what those funding opportunities and other guideline opportunities might be and to coordinate the way they can interact with the government.

**Senator ALLMAN-PAYNE:** Is there any existing work that is happening, for example, in your department that you envisage will be transferred across to that authority?

**Ms Evans:** No. We don't envisage anything that we are doing transferring in the sense of a machinery-of-government impact. Certainly what we have known for quite some time is that there has been a real appetite in the community for there to be a stronger coordination of government effort. We had been doing our own consultations, particularly in the context of the hydrogen hubs work that we do. We had been on the ground and we had been hearing that kind of feedback, and that was the same kind of advice that the consultation processes on the net zero authority also heard. So in some ways, this is a response to what we were hearing and what the task force heard. We had not been specifically resourced to do anything about that and we now have the net zero authority to be able to fill that gap. It will work with our department and with other departments, particularly the infrastructure, transport and regional departments, but many others—the education employment portfolio and so on—to bring all of those arms of government to bear on the communities that will be directly affected.

**Senator CADELL:** I would like to ask questions around the national electric vehicle study, and vehicles generally. We might talk about fuel emissions reduction, if that's okay. I went to Industry after some questions

last time. We were talking about their role in buying a 50 per cent fleet. How are we looking with take-up in Australia in the last six to 12 months with our strategy? Are we able to break down numbers on buying and how that is going?

**Mr Ryan:** I can probably give you the latest figures from the April year to date. As at the end of April, uptake of EV was 7.7 per cent of new car sales, compared to the same period last year, which was 2.8 per cent. That gives you an idea of the year to date and how we are tracking.

**Senator CADELL:** Is that broken down into metropolitan versus regional in any way?

**Mr Ryan:** I haven't got that number in front of me.

**Senator CADELL:** Can you have a look?

**Mr Ryan:** I can take it on notice and see if we have that information available.

**Senator CADELL:** I am a believer that we're on this path together. The concerns on range anxiety are still coming forward as infrastructure is being rolled out. This question is probably a crossover of the department of infrastructure. Are we seeing greater cooperation between the departments on infrastructure? I know locally when they talk about the fleet and the electricity infrastructure needed, it is just in the departments. But regional Australia is where I come from and it is where the range anxiety is. Is there a plan for the department to work with others to put more chargers, more facilities for these right across Australia?

**Mr Ryan:** Yes is the short answer. Potentially, I could provide a little bit more detail. There are a number of things. There have been commitments by all governments, including the Commonwealth government, to fund infrastructure, most notably recently the grant with NRMA to roll out 117 plus—

**Senator CADELL:** Was that \$13.1 million or something like that?

**Mr Ryan:** That was a \$39.3 million contribution from government.

**Senator CADELL:** And that was over three years?

**Mr Ryan:** Yes. The last of them will be rolled out the first quarter of 2026. Beyond that, the national electric vehicle strategy, which was released in April, had six areas of collaboration across governments that all ministers had agreed to. One of those goes directly to your question that was around regional and remote charging infrastructure.

**Senator CADELL:** Is there a specific program on non-private vehicles—buses, trains, these sorts of things—where we are looking at non-traditional fuels? Are we looking at hydrogen for some of the trains and heavy vehicles as part of the program?

**Mr Ryan:** Again, I can give you examples. There is a number of different programs that would go to fuels. The one that I am thinking of—off the top of my head—is an ARENA program that has been funded for sustainable aviation fuel. There was—

**Senator CADELL:** Sustainable fuel?

**Mr Ryan:** Yes, sustainable aviation fuel. I would have to recall when it was but it was a couple of budgets ago. About \$30 million was made available through ARENA for that. Beyond that, there is also work underway in the department of infrastructure that's funded in the budget to look at some of the road maps and action plans for decarbonisation of transport, and they look beyond light vehicles—light vehicles have been the focus of the electric vehicle strategy—to other sectors, including rail, aviation, marine and others.

**Senator CADELL:** The United Firefighters Union of Australia came out recently with their concerns about EV uptake in Australia. This is where we get different departments working. Are we doing anything to address their concerns around health and safety when dealing with electrical vehicle fires? Is that in your remit or are you part of a group that is looking at that?

**Mr Ryan:** Yes, that came up when we undertook consultation on the electric vehicle strategy. What we did do as part of the strategy was fund a package that looked at research and developing training standards for emergency service workers and first responders. Money was provided in the budget to address that specifically. Beyond that, if I just talk a little bit more about that, there's certainly not a lot of evidence around for fire safety, particularly the batteries in the vehicles. There is a little bit that has been done, potentially around the heat that's generated.

**Senator CADELL:** Do you mean continual burning?

**Mr Ryan:** I mean the ongoing burning and, potentially, the toxicity of that. There is more work to be done in that space as well.

**Senator CADELL:** Does your department have a role in that ongoing? Is it not just handed off to another department?

**Mr Ryan:** We will be working across government but we have the lead in building that package of training for first responders and emergency service workers.

**Senator CADELL:** Feel free to shoot me down for asking questions you don't have the answers to. But the numbers we have seen from the firefighters union are saying a truck with storage water happens to be about the amount of water you would need to stop a vehicle fire. With the ongoing burning stuff, about 40 trucks are needed for an electric vehicle. In Taiwan, they are bringing in containers filled with water and dunking the car in them. Is that the sort of thing we are looking at going forward?

**Mr Ryan:** Potentially. I haven't seen those things that you referred to but, as part of the work that we're doing, one of the things we are funded for was some of the cross-jurisdictional training with fire departments to have demonstration fires, for want of a better word, to be able to coordinate and work out the best approach that is putting that training package together.

**Senator CADELL:** In the good old days of fires, I remember as cadet, we got doused in PFAS foam for fun. That was probably bad, on reflection. Where we go forward with the electric vehicles and doing it safely, are we looking at any revision work with building codes or anything like that for basement car parks? I know a lot of ships now aren't taking EVs without them being containerised and, if they do start a fire, they just let them burn. They don't fight them anymore. Are we looking at things like that?

**Mr Ryan:** Yes. This is led by DISR. I think the commitment is that by 2026 all new building apartments need to be fitted for EV charging.

**Senator CADELL:** Charging, but increased fire measures?

**Mr Ryan:** I don't recall. I'd have to take that on notice or refer you to DISR to ask that question.

**Senator CADELL:** I'm happy to do that. This might be in your remit. With the fuel efficiency standards that we're talking about coming forward in the car space—and I'm happy to refer it elsewhere—when we're benchmarking that worldwide, will we be taking fuel standards as different? We have highly sulphur contents. Will that be considered as we go forward in the fuel efficiency standards?

**Mr Ryan:** Simple answer: the FES has been led by the department of infrastructure and transport. But I do know that at this stage consultation is open to 31 May—the end of this month—and they're taking on board all the input from stakeholders. It's a very broad-ranging consultation paper that asks a number of questions that go to not only the level that you might want to set for the fuel efficiency standard but also all the things that sit around it, including the administration, how long it takes to implement, and what concerns people might have based around the principles of putting a fuel efficiency standard in place for Australia.

**Senator CADELL:** Towards the end of last year the government passed through the Senate a tax incentive for EVs. Do you know how many people have claimed that to date?

**Mr Ryan:** That's the electric car discount. That's headed by Treasury. You'll need to ask Treasury. I don't know.

**Senator CADELL:** Is there an EV working group where Treasury, infrastructure and everything come together for all of these little pieces to say, 'This is where we're going'?

**Mr Ryan:** Yes. There are a number of working groups, depending on what issue we're talking about.

**Senator CADELL:** All different issues?

**Mr Ryan:** Yes. If you start at the ministerial level, you've got ECMC, which is chaired by the Minister for Climate Change and Energy, and that works its way down into the working groups that supports it, including decarbonisation working groups. That's mirrored on the other side in terms of transport ministers and similar. Then there's a group of officials across all departments that meet regularly not only in the Commonwealth but also across states and territories. There's a number of them, depending on which issue is the one you're referencing. But yes; that exists.

**Senator CADELL:** You're still the lead of NEVS? On the National Electric Vehicle Strategy, are you guys king?

**Mr Ryan:** Yes—for want of a better word, we're holding the pen on that one, and the other Commonwealth agencies are supporting us. Likewise, with the fuel efficiency standard, the department of infrastructure and transport are holding the pen on that, and we're supporting them and providing input. It might be in a number of

areas, it might be some of the policy work that we've been doing that you've been talking about, but it's also emissions, projections and things like that which would be held in the department as well.

**Senator PAYMAN:** I note that the 2023-24 budget includes \$2 billion in investment for the Hydrogen Headstart program. What kind of projects will the funding deliver?

**Mr Gaddes:** The Hydrogen Headstart program is designed to pull through the pipeline some of the investment in hydrogen which isn't reaching financial investment decision. Currently there's \$200 billion to \$300 billion worth of investment announced but it hasn't quite been able to reach the final investment decision because of the cost gap between the cost of producing and the market price for green hydrogen. Hydrogen Headstart will be designed over the next six months with ARENA, states, territories, industry, academia and people like that. It will be designed to build two to three very large projects in the order of 1,000 megawatts of production for hydrogen, and for green hydrogen in particular.

**Senator PAYMAN:** Thank you.

*Senator Van interjecting—*

**Mr Gaddes:** Two to three is the target. Two to three large projects of 1,000 megawatts—yes. Not each; that's total.

**Senator VAN:** Thank you.

**Senator PAYMAN:** In this committee we've heard how the US Inflation Reduction Act and other programs of other jurisdictions are having an impact on global investment. Is this investment a response to that?

**Ms Munro:** The government is very aware of the very significant investments that are happening in the US, the EU, Canada and other countries. It is one of those areas where—I think the language of the minister has referred to the \$2 billion to be a down payment, but that comes off the back of very significant investments. I think the figures that are outlined in the budget sort of refer to a figure of \$40 billion, and that all goes to building the capability of this country in renewable energy and other clean energy industrial areas. There was also another \$5.6 million that was allocated in the budget to do a further round of work and analysis to better understand those opportunities for Australia based on our comparative advantages and also what's happening in other countries. I would also note that over the weekend there was a very significant announcement made on a compact reached by the Prime Minister and the President of the United States, which is on climate change, critical minerals and clean energy. In essence, one of the core aspects of that is to work very closely with the US, given the significance of their investments under the Inflation Reduction Act, to further analyse and understand those clean energy supply chain opportunities and to come back and report to government by the end of the year on that.

**Senator PAYMAN:** Speaking of opportunities, what are the opportunities available to Australia from building a hydrogen industry, specifically green hydrogen? Do you think Australia has the natural competitiveness or competitive advantages that make hydrogen an attractive investment?

**Mr Gaddes:** I think it's pretty well reported that Australia has a pretty good comparative advantage when it comes to hydrogen production. We have large renewable energy resources. We have space available to build it. We have the strategic assets around ports and things like that. The government's invested quite a bit in this—previous governments have as well—in terms of hydrogen hubs to set up the precincts where we can have the common infrastructure, the demand and the supply in the same area. In terms of the opportunities, there's both a domestic use and an export opportunity that can be derived from the program and a hydrogen industry. There's direct export to partners like our normal, traditional trading partners in north Asia, Japan and Korea. Other countries, like Singapore and Germany, are also looking to Australia to be able to import hydrogen from Australia, so they will be new trading partners. Having a really robust hydrogen sector will also allow for the development of other new green materials, like green steel and those sorts of things. In addition to the Hydrogen Headstart program, the government also announced funding for what's called the Guarantee of Origin scheme. In the first instance, that will allow tracking of the emissions associated with hydrogen production and renewable electricity, but that can be expanded for other low-emissions products, such as cement, steel, iron and those sorts of things. It's a foundational element for a broader piece.

**Senator PAYMAN:** What will this announcement mean for the regions in Australia in terms of the resources and potential to support a green hydrogen industry?

**Mr Gaddes:** It's a large amount of infrastructure to be built. It won't be necessarily built in cities, because of the size and the scale that are needed, so a number of the hydrogen hubs are scattered around Australia. There's one in Townsville, one in Bell Bay in Tasmania and I think there's one in the Pilbara—I'll take that on notice so I can get that right. There's a range of regional areas which will see quite significant infrastructure spend and jobs coming from these programs.

**Senator PAYMAN:** Speaking of jobs, what kind of flow-on effects are available from green hydrogen in other industries?

**Mr Gaddes:** We're starting to get down to a level of detail below my knowledge now, so I might pass to my colleague Ms Zerger to give a little bit more information.

**Ms Zerger:** Within the *State of hydrogen 2022* report that was released recently, it's estimated that by 2050 Australia's hydrogen industry could generate \$50 billion in additional GDP and create more than 16,000 jobs.

**Senator PAYMAN:** Will the Hydrogen Headstart program be limited to supporting green hydrogen?

**Mr Gaddes:** Yes. At this stage, although the final design hasn't been implemented, the government's made it quite clear that it will be green hydrogen. That sends a strong signal that that's where the government sees a comparative advantage for Australia. It aligns with the decarbonisation policies of the government. It also allows for government support to go to that part of the sector that has the green premium that needs to be filled.

**Senator PAYMAN:** I have a final question. I'm curious to know what the reaction to this announcement has been from industry and climate groups.

**Mr Gaddes:** It's been overwhelmingly supportive. But I might pass again to Ms Zerger, who was on an overseas trip with international colleagues. She saw it firsthand and might be able to provide a little bit more information.

**Ms Zerger:** I was in Rotterdam for the World Hydrogen Summit when the budget announcement came out. Industry were very supportive. We spoke to a number of the industry players that were there: international companies with Australian projects and also Australian companies looking to progress hydrogen projects. There was a lot of interest at that conference and a lot of engagement about what the program would look like. In general I think the feeling was that this would see Australian projects raised in priority, in particular in the C-suite, and when they were looking, from a global perspective, at which projects they were looking to progress. The Australian projects were still in the running. But, yes, there was a lot of interest and positive engagement about the program.

**Senator PAYMAN:** Thank you. I could go on all day, but I'll share the call.

**CHAIR:** Senator Van.

**Senator VAN:** I'll do that on your behalf! Sticking with hydrogen—

**CHAIR:** That will be 10 minutes, Senator.

**Senator VAN:** Probably—in this call! I was at the launch of the Net Zero Australia study a few weeks back. I noted that they don't have any hydrogen in their projection models by 2030. I don't believe ClimateWorks does either, looking at their projections. Can you give projections on how much green hydrogen, or clean energy hydrogen, is going to be in production and use by 2030?

**Ms Zerger:** I don't think we've done those projections. We're in the midst of doing a refresh of the National Hydrogen Strategy that will look at where the government wishes to position the hydrogen industry and targets. The first funding for the Hydrogen Headstart program, in terms of payments for that production, comes in in 2026-27, so we are expecting some large-scale developments and production then.

**Ms Evans:** Perhaps I could just add to Ms Zerger's response. With the development of the hydrogen strategy, all of the work that we've done with the current government and also with the previous government has seen hydrogen as a longer-term transition fuel. So it's not surprising at all that, for example, Net Zero Australia—the work by Princeton as well as the University of Melbourne—

**Senator VAN:** And Queensland.

**Ms Evans:** and Queensland—thank you—doesn't show that that's a significant contributor to 2030, but the expectation is that these industries will grow and be substantial contributors to the outcome of net zero by 2050.

**Senator VAN:** One of the drivers or the needs to produce green hydrogen is an excess of VRE—renewable energy. In any of these regions where you're currently looking to prioritise these hydrogen hubs, do they currently have an excess of renewable energy or clean energy?

**Ms Zerger:** The hydrogen hubs that were announced under the auspices of the Regional Hydrogen Hubs Program have different methods of getting their renewable energy. Some are close to some of the renewable energy zones, particularly in the Hunter, and some are potentially using grid-connected renewable energy. So they do differ by project. Other hubs are focused on the common user infrastructure for electrolyser projects and other projects, so they might be developing pipelines or port infrastructure to support the hydrogen industry in that hub and in that region.

**Senator VAN:** But you'll agree that having that excess energy is one of the key drivers behind hydrogen production?

**Ms Evans:** Excess variable renewable energy is certainly one of the potential uses for hydrogen, which has just been discussed. Again, that was in the National Hydrogen Strategy. When we developed it, people acknowledged that there's a potential for a hydrogen industry to act as another way of controlling demand and supply in the grid. But it's certainly not the only way that you can develop the hydrogen industry. Many of the concepts, some of the larger concepts that we've seen coming through, really have a dedicated supply of their own so they're not relying on there being some sense of an excess in the grid for them to be viable. It depends on the circumstances. I certainly wouldn't characterise it as necessary, or as a requirement, for there to be excess VRE on the grid before you can have a hydrogen industry developed.

**Senator VAN:** You make a very good point: it doesn't need to be on the grid. It could be in a standalone microgrid, for example. Maybe this is touching on the Powering the Regions Fund a little bit, but it strikes me as odd that we have what's known as the 'rhombus of regret' up in north-west Victoria, which is producing five gigawatts of VRE, most of which is being curtailed at least half the time. It strikes me that if we're going to be powering the regions and we've already got this excess of VRE, why is that not being considered for a hydrogen hub when there's already excess energy going to waste there?

**Ms Zerger:** As Ms Evans said, there are a range of projects. The projects will have different needs, and the economics of the projects will be different as well. There is a large project led by the South Australian government that is looking at the excess renewable energy and using hydrogen to capture that. From a technical perspective, the type of electrolyser you use—the cost of that and balancing it—may mean that's a decision for the project proponent on a case-by-case basis.

**Senator VAN:** But you have not looked at north-west Victoria as a region for a hydrogen hub?

**Ms Zerger:** The 2019 National Hydrogen Strategy had prospective regions that were considered to be hydrogen hubs. Then there was a competitive process through the Regional Hydrogen Hubs Program to determine the grants for those regions, and that was for proponents to come forward. I don't recall there being an application from north-western Victoria as part of that process.

**Senator VAN:** Which is correct, but I think it's a very real shame. I think some work should be done on that, either at the Victorian state government level or at the federal level.

This will be a question that I assume you'll have to take on notice. Has any work or analysis been done on the economics of running a hydrogen electrolyser for a number of hours a day when there's excess energy versus those countries that produce clean energy 24 hours a day? And how will Australian green hydrogen, if it's just run off VRE, stack up against those international ones—Korea, France, the US, Canada et cetera?

**Mr Gaddes:** We'll take that on notice.

**Senator VAN:** Thank you.

**CHAIR:** Senator Hanson-Young.

**Senator HANSON-YOUNG:** Mr Fredericks, or perhaps this is a question for Ms Evans—I know I have asked some questions on notice in relation to the Isaac River coal mine approval, but I want to come back to the overall list of projects outlined in the most recent *Resources and Energy Major Projects* report. There were 116 coal and gas projects in the pipeline outlined in that report. That was prior, of course, to the approval of last week's coalmine. Could you, please, update us as to how many projects are in the pipeline after that decision?

**Ms Evans:** The report that's developed by the department of industry wouldn't have necessarily changed since that decision.

**Senator HANSON-YOUNG:** So it's 116?

**Ms Evans:** I don't actually know the answer. Ms Rowley may.

**Ms Rowley:** I will just say the *Resources and Energy Major Projects* report is produced by the department of industry. We use that as an input to much of our analysis of greenhouse gas emissions, but we can't speak to and are not responsible for the development of that particular report.

**Senator HANSON-YOUNG:** I understand that, but this is a competent government, a government who understands that climate change is a key priority for whole-of-government. Minister McAllister would agree with that, I imagine.

**Senator McAllister:** I would.

**Senator HANSON-YOUNG:** Surely, as the climate change department, you are well and truly aware of what the projects are, how many and the impact?

**Ms Evans:** As we've explained, we take that advice from the department of industry in terms of that report. I think where we have previously answered questions, which may be what you're asking about, is how we use that in the projections, and we do factor in, as we've explained on a number of other occasions, when there is a mine or an oil and gas facility that has past the point of having final investment decision. We can include it specifically in the projections. But, beyond that, we take a forecast of demand for the different products, and in this case for the Isaac River coal mine I want to point out that it is a metallurgical coalmine, so it's producing coal that is used in steelmaking. We would include that—

**Senator HANSON-YOUNG:** It still generates emissions.

**Ms Evans:** It does, a relatively small number of emissions in Australia. So the projections already take into account the demand both domestically and globally for these products from Australia, including metallurgical coal. I don't know whether we can answer how much of our projected demand the Isaac coalmine delivers, but we could probably take that on notice, if that's what you're trying to ask us.

**Senator HANSON-YOUNG:** That wasn't my question, but I'm very happy for you to answer that question, as well. If you want to take that on notice, that would be helpful.

**Ms Evans:** Yes.

**Senator HANSON-YOUNG:** What I'm trying to ascertain is how many projects that your department is aware of, is giving advice to, is giving factual information to from the Emissions Reduction Division in relation to the projects as outlined by that report.

**Ms Evans:** Again, I'm not sure we can actually answer the question in the way you're posing it.

**Senator HANSON-YOUNG:** How would you like to answer it, Ms Evans?

**Ms Evans:** I think what you might be asking—it's hard to understand—is: how many of these projects are currently going through the approvals process in the assessment and approvals area of the department? That could be a question you could ask them tomorrow.

**Senator HANSON-YOUNG:** This isn't something that you keep a record of on the basis of the impact that it's having on the broader government's emission reduction goals?

**Ms Evans:** We do. As I've explained already, we do a projection about the total amount of demand and so on. Where we can become specific about which projects are going to fulfil that demand, we factor those in. In the broad, the activity that we see in Australia is consistent with those projections. So, in that sense, we are anticipating the kinds of approvals that you see with the Isaac mine. Beyond that, through the emissions reporting functions that we have, we track historical emissions and report on those, with the Clean Energy Regulator's support, of course, in collecting that information. We track that through in the quarterly inventory and the national inventory and all of that. I think the most recent figures are showing us—is it 24 per cent below 2005?

**Ms Rowley:** The most recent published quarterly report shows Australia 21 per cent below 2005 levels, on the latest quarterly data. There will be another quarterly report released by the end of this month.

**Ms Evans:** The quarterly emissions reporting and the national reporting that we do show us as currently on track to meet the government's targets. And that includes the kinds of decisions that you have seen with that Isaac mine.

**Senator HANSON-YOUNG:** Ms Evans, have you briefed either the environment minister or the climate change minister in relation to the recent information relating to temperature rises hitting 1.5 degrees by 2027?

**Ms Evans:** You're referring to the World Meteorological Organisation's report, which they put out annually, looking at what's happening with projected temperature over, I think, a four or five-year period. The latest one went out to the end of the decade. We did not put a specific brief. I'll check with my colleague. We did not do a specific brief on that report. It's a very technical report, and the general messages in it are consistent with the current understanding of what's happening on climate change. So we didn't feel there was a need to do a specific brief on that particular report.

**Senator HANSON-YOUNG:** And no government minister has asked for information as to what that means in relation to Australia's current policy settings?

**Senator McAllister:** Senator, government ministers are regularly briefed on the climate science, including of course most recently the IPCC's report. I personally had cause to engage with it in a very particular way because I attended the Petersberg talks in Berlin, where, of course, the science was the subject of quite some discussion. I

think the implication of your question—that ministers are not being briefed on the climate science—is not correct. They are.

**Senator HANSON-YOUNG:** At the end of last week there was a pretty shocking warning that we're going to hit 1.5 degrees within the next five years. Did anyone from your government, Minister McAllister, call up the department and say, 'Hang on a minute, what does this mean for us'?

**Senator McAllister:** I'll take it on notice, because I'm not personally aware of the requests made by Minister Plibersek or Minister Bowen, but I can assure you that ministers are regularly briefed on the state of the climate science from a range of sources.

**Senator HANSON-YOUNG:** Ms Evans, are there any implications of the world hitting 1.5 degrees by 2027 for Australia's current climate change targets and policy settings?

**Ms Evans:** The government has, obviously, legislated the climate change targets for 2030 and 2050. So there isn't any implication as a result of that report for those legislated targets.

**Senator HANSON-YOUNG:** Just to be clear, those legislated targets are consistent with temperatures getting to 1.5 degrees by 2027?

**Ms Evans:** Those figures are the projections of the World Meteorological Organisation. They're the result of global activity on all of these issues. The targets that the government has set have in mind the objective of the Paris Agreement, which is to keep temperatures below two degrees and to make best endeavours and best efforts to keep it to 1.5 degrees. Certainly, the targets that have been set with getting to net zero by 2050 across all gasses for the Australian economy is consistent with that objective.

**Senator HANSON-YOUNG:** Do Australia's current policy settings help or hinder that 1.5 degrees temperature rise by 2027?

**Senator McAllister:** Frankly, Senator Hanson-Young, they help in very important ways. Our government went to the last election very clearly saying to the Australian public that we sought to get Australian climate policy back on track. In the first months of the government, we notified a very significant increase in relation to our 2030 target to the IPCC. We then legislated that, which produces a range of outcomes, including certainty for the business community about the direction of travel. We have then set about establishing policy settings that will allow us to deliver against those targets. This helps a great deal.

**Senator HANSON-YOUNG:** But they're not good enough, are they?

**Senator McAllister:** We'll need to work within the international community if we are going to tackle climate change and to maintain our climate and the degree of global warming to safe levels. The information available to the global community is that we are not on track, and Australia will play our part in trying to drive the ambitious global action that is necessary. A core part of that is getting the policy settings in Australia in place so that we can credibly deliver on our commitments and we can build confidence in the international system that players like Australia are willing to come to the table and be part of a global solution. That wasn't the case prior to the election, and it is now.

**Senator HANSON-YOUNG:** Has this new dire warning from the world scientists, that we will see temperature rise by 1.5 within the next five years, well before the end of the decade, been cause for thought on the government's continual approval of new coal and gas projects?

**Senator McAllister:** The minister has made it really clear that her job is to apply the law as it currently stands, and she is doing that. As I've outlined to you, our focus is really on decarbonising the Australian economy. That is the commitment that we made. The decision to legislate the safeguard mechanism, the decision to establish a National Electric Vehicle Strategy and the decision to fund the Rewiring the Nation strategy are all important policies that help us along that journey.

**Senator HANSON-YOUNG:** The law allows for the environment minister to approve new coal and gas, despite the fact that the world is on track to hit 1.5 degrees by 2027. That's the law—right?

**Senator McAllister:** The policy framework is that emissions from large projects of any kind, whether they are resource projects or other kinds of projects, are managed by the safeguard mechanism, and that's the framework within which we seek to deal with Australia's emissions.

**CHAIR:** I will need to rotate the call, Senator Hanson-Young. I'm sorry.

**Senator HANSON-YOUNG:** I know Senator McKim has some questions and has been waiting patiently.

**CHAIR:** As has everybody else.



**Senator HANSON-YOUNG:** We've been waiting since the morning tea break. I have a final question on my round. There were some questions asked earlier about hydrogen. When will the \$2 billion be out the door, and when do we expect projects to actually be operational?

**Ms Zerger:** The first payments for Hydrogen Headstart are expected to go out in 2026-27.

**Senator HANSON-YOUNG:** When will the projects be operational?

**Ms Zerger:** They would need to be operational and producing hydrogen to be able to get access to that money at that time.

**Senator HANSON-YOUNG:** So they've got to be operational before they can have access to the \$2 billion? There seems to me to be two time points there.

**Mr Gaddes:** I might be able to help you there. It's designed as a production credit. It's paid at the time production occurs, and it fills the gap between the price at which the hydrogen is produced and the price at which it is sold. So it's most efficiently delivered at the time that it is sold.

**Senator HANSON-YOUNG:** So we won't see any of that money out the door until 2026-27?

**Mr Gaddes:** That's correct.

**Senator HANSON-YOUNG:** Thank you. Senator McKim has the—

**CHAIR:** No, not Senator McKim. You said two of you in 10 minutes, and you've done 15. I'm afraid we're going to go to Senator Hughes, who has also been waiting since before the tea break. Then we will come back to you.

**Senator HANSON-YOUNG:** They've had three goes. Maybe we could wind up—

**CHAIR:** No. You've had more time.

**Senator HANSON-YOUNG:** Some dorothy dixers would be helpful!

**Senator HUGHES:** I will try and stay with the Hydrogen Headstart program, if I can. Coming back to what Senator Hanson-Young just asked, has there been any modelling? What's the estimated gap between what a developer investing in this needs, what it's going to cost to produce and what they can actually sell it for? What is that gap expected to be? What price per kilo of hydrogen is expected to be paid by the Australian taxpayer?

**Ms Zerger:** It does depend on layering. There are also state governments that have some quite generous incentives for hydrogen. But we think—and this is from our work in talking to project proponents, and also from advice from the CEFC and ARENA—that it's probably in the vicinity of about \$2 to \$4 a kilo.

**Mr Gaddes:** I might just add to that response, if I may? It will be a competitive process and it will be designed in a way to have the most efficient outcome. Those companies, or those projects, that have the lowest gap will be more competitive in the competitive process.

**Senator HUGHES:** I think Senator Cadell is about to burst out of his skin, so I'll just give him one question.

**Senator CADELL:** Is it a contract for difference?

**Mr Gaddes:** No.

**Senator CADELL:** It's not a contract for difference, it's just subsidies?

**Mr Gaddes:** It's yet to be designed. It may be designed as a contract for difference, but it's essentially designed as a production credit. So it fills the gap. It's very similar to a scheme called the Fuel Security Services Payment, which is already in place and which supports refineries in Australia.

**Senator CADELL:** No, when you said 'difference' I thought it might have been a contracting-for-difference solution. But if it's not decided yet. That's fine.

**Senator HUGHES:** Could any of the Hydrogen Headstart money be used to subsidise the electricity costs for the recipients of those grants, or the payment?

**Mr Gaddes:** It's fair to say that that's essentially what it's doing.

**Senator HUGHES:** That's exactly what it is?

**Mr Gaddes:** The electricity costs are a large component of the costs of production. The renewable energy is a large component of the cost. So there's capital cost, but there's—

**Senator HUGHES:** Are we talking both green and blue hydrogen here?

**Mr Gaddes:** Green hydrogen, because at this stage the program is an announcement for green.

**Senator HUGHES:** Only for green?

**Mr Gaddes:** The renewable energy cost is the largest operating component. There are capital costs which will need to be recovered, but the renewable energy is a large component of the operating costs.

**Senator HUGHES:** Given that the funds are being provided by the Australian taxpayer, will only Australian companies be eligible for this? And will the hydrogen be reserved for domestic use?

**Ms Evans:** The reality is that we still haven't designed this program, so this is the work that will be done over the next six months and with guidelines to come. Everything that has been said today is still dependent on the design of the program. That includes if it will be a contract for difference or some other form of payment. All those things are still to be settled. What's the degree of subsidy per unit? That's all to be settled. It's a bit hard to get down to some of the specifics about who would be involved, but we're expecting these to be in Australia.

**Senator HUGHES:** But surely we're not providing revenue support to export hydrogen so that, in effect, Australian taxpayers are subsidising international customers?

**Ms Evans:** We need to work through that, and it may be that the kind of scale that's required—

**Senator HUGHES:** Australian taxpayers will fund foreign consumers through their own tax dollars being paid? Wouldn't that be a fundamental tenet of providing security in Australia?

**Ms Evans:** It would be taxpayer funding supporting the growth of an export industry in Australia that will have significant benefits to the Australian community over a long period of time. But these are things that, again, are yet to be settled in the guidelines development process.

**Senator HUGHES:** I'm sure we'll come to this in 1.2, talking about the energy relief \$500 program—

**CHAIR:** No, you're fine.

**Senator HUGHES:** Okay. I've got a little bit to talk about with the energy relief program, but I just want to clarify one point and we can include them together. Not all Australians are going to be able to access the bill relief of up to \$500 but, in effect, at the same time this \$2 billion of taxpayer funds is going to be used to subsidise the electricity costs of people like Twiggy Forrest et cetera. Would that be a fair—

**CHAIR:** I think that's a step too far. What they're telling you here is that they haven't designed all of the elements of the program, so it's hard to say—

**Senator HUGHES:** Chair, that's actually for them to answer. But we do know where these hubs are being proposed—in fact, I heard Twiggy Forrest on 2GB this morning very much espousing some of this. In effect, the Australian taxpayer will be subsidising hydrogen producers, including people like Twiggy Forrest, and their projects, whilst everyday, middle Australians won't be covered by energy bill relief. I'm trying to understand who's the priority here for government spending.

**Mr Fredericks:** I'll assist on that one, just to gather up a few propositions that have been put to you in the evidence.

**Senator HUGHES:** I know there are different programs, but they do—

**Mr Fredericks:** I'll deal with the hydrogen first. To reinforce something that Ms Evans said, at the end of the day, the purpose of this program is to generate an Australian industry, a hydrogen industry, that can compete with the rest of the world. To be clear, that was the same philosophy that drove the creation of the Regional Hydrogen Hubs Program under the previous government. We've actually had policy consistency in aim across the last few years that this department has been aiding governments of both persuasion.

**Senator HUGHES:** That's okay. I'm trying to establish whether \$2 billion of Australian taxpayer money is going to be used to, in effect, subsidise foreign consumers? Is it an export market that we're generating, or are we allowing that hydrogen to be used—that is being funded in part by the Australian taxpayer—for domestic use?

**Mr Fredericks:** I'll just reinforce my point. It is driving an Australian domestic industry that will potentially be an export industry and drive the receipt of Australian income, by being an export earner.

**Senator HUGHES:** But the Australian income will be generated by private companies whilst being subsidised by Australian taxpayers.

**Mr Fredericks:** I'll just reinforce my point. Consistent with the policy approach of the previous government, this is about driving the creation of an Australian industry, in which we have a great comparative advantage, that will be able to drive Australian domestic industry and will also be able to drive export-earning dollars. That's the purpose of the program. Secondly, as Mr Gaddes said, it will be done by way of competitive grant—a competitive process. At the end of the day, that is what the taxpayer would expect of a program like this. It will be a competitive program, but it will be done in a way that's consistent with all the rules and laws that govern competitive procurement processes and grant processes in the Commonwealth. We'll make sure we do that as

well. At the end of the day, there is great continuity here and there's a clear aim that's to the advantage of Australia, and it'll be done in the proper way.

**Senator HUGHES:** And there will be a framework put in place to ensure that there's a substantial amount of it kept for domestic use, as opposed to—and this is still the crux of the issue: what is the framework that's going to be put in place? Is that still being developed—

**Mr Fredericks:** Correct.

**Senator HUGHES:** and what are the guidelines being developed to ensure domestic security? We hear lots of complaints about gas going offshore, where it's not used for Australian purposes. I want to make sure that this is a focus going forward—that any industry that is subsidised by the Australian taxpayer is first and foremost providing that energy for the Australian economy, domestically.

**Mr Fredericks:** As Ms Evans said, the framework for this program, including the guidelines, are in development, and they'll be done in consultation. The issue that you raise will be one consideration that will be brought to bear.

**Senator HUGHES:** Okay. I want to move to something else, but, Chair, do you want to move on and come back to me?

**CHAIR:** Yes, that's probably the easier way to go. Senator McKim.

**Senator McKIM:** Good morning, folks. I have some questions around the methodology that underpins the land use, land-use change and forestry carbon accounting. Firstly, is it the case that, in calculating emissions for LULUCF, given the methodology used and the way it's reported, it's not possible to disaggregate emissions from native forest logging?

**Ms Ford:** We calculate land use and land-use change emissions at a variety of layers. I think it is possible to identify emissions from—what are you specifically asking about?

**Senator McKIM:** Native forest logging.

**Ms Ford:** Let me see if I can pull that up. We do have emissions estimates from native forests in the accounts.

**Senator McKIM:** Okay. Is that broken down by state, for example? If I wanted to know what you think the emissions are, using these methodologies, from native forest logging in Tasmania, could I?

**Ms Ford:** Yes, I believe that's the case. I don't have them at hand.

**Senator McKIM:** There's a category of 'forest land remaining forest land'. Is it the case that forestry emissions are reported under that category along with removals from carbon sequestration from growing forests, and that that's effectively the emissions source, and the removal source is reported as the net figure in that subcategory and therefore doesn't allow for full transparency by decision-makers? Do you think that's a fair comment?

**Ms Ford:** We report on net emissions in the inventory. We're interested in both the emissions that occur when forests are harvested and the emissions that are sequestered when forests regrow. I think you were asking about the 'forest land remaining forest land' converted to forest. That includes the net emissions associated with the harvest and regeneration of native forests, establishment and harvest of plantations, wildfires and prescribed burning, regrowth of forest on previously cleared land and carbon stored in harvestable products.

**Senator McKIM:** Are those all disaggregated?

**Ms Ford:** Yes, I believe that's the case.

**Senator McKIM:** Okay, so it wouldn't be the case that the emissions and the removal of carbon are reported just as a net figure?

**Ms Ford:** I'd have to check. In terms of the broader context, though, I would say that Australia's reporting of our land sector emissions, alongside all the other sectors, is reported consistent with our obligations under the United Nations Framework Convention on Climate Change and the Paris Agreement. The categories of reporting that we use are consistent with those rules. I would also add that Australia's inventory is seen as one of the most transparent, both in terms of the level of reporting that we do and the timeliness of our reporting, relative to others as well.

**Senator McKIM:** You have responded to this, but perhaps I could just ask if you can come back on notice if you have anything further to add. I'm specifically interested in, for example: do we know what the emissions are from the native forest logging sector in a particular jurisdiction? I'll use my home state of Tasmania as an example. I'm sorry to paraphrase you, but you said you think that that's discoverable through the data?

**Ms Ford:** Yes. We have our website. It's got an unfortunate acronym, I'd say. It's the Australian National Greenhouse Accounts, which you can search by IPCC sectors, which has a range of data at the different levels of aggregation that we report against. I would have to double-check, but I believe that there's state-level reporting there as well.

**Senator McKIM:** Is the government or the department considering whether there are any improvements available to the transparency of carbon emissions reporting, specifically for land use, land-use change and forestry? Is there a body of work going on to try and make those reporting standards more accessible or more transparent, or is the government or the department satisfied with the current level of transparency and detail in those arrangements?

**Ms Ford:** I'll probably take that question in two ways. As I said, we report our emissions estimates consistent with our obligations under the Paris Agreement and the UNFCCC. Each year we are reviewed by the UNFCCC, who has not found any material issues with the way we do our reporting, including against the principles that they have, which includes principles related to transparency, comparability, accuracy and the like.

The second thing that I would add is that we have an ongoing program of work which is about continuous improvement across all sectors in the inventory, and that includes emissions from the land sector. In particular, we have an ongoing work program with CSIRO and others to ensure that the way that we estimate our emissions in the land sector remains accurate and robust and uses the best available science and data. We're very much committed to making sure that we are taking in the latest available science.

**Senator CADELL:** With the process we took with an 82 per cent renewables target by 2030, we worked around it a bit and where we go there. How does the department feel we are heading towards that? With the current spending and policy settings, is that achievable? Is it likely to be achieved?

**Mr Duggan:** I think Minister Bowen has used language similar to this to say that it is certainly ambitious but achievable. That would be the way we'd describe it.

**Senator CADELL:** That's what Minister Bowen is saying. What would you say?

**Mr Duggan:** I would say the same. We have seen a significant acceleration of renewable energy. Obviously we need a further acceleration from here. It won't be a linear pathway to 82 per cent renewables by 2030. But in recent years we have started to see—particularly around solar but also around wind—a very significant increase in penetration within the electricity grid. The forward indicators we have around the investment pipeline also indicate to us that we will now start to see even more of an acceleration as some of the enabling activities are put into place, be that around Rewiring the Nation or capacity investment schemes and other programs.

**Senator CADELL:** Earlier today, in a question that was potentially taken on notice, we heard about the 5,000 500-megawatt solar panels every day. We heard about the 40 wind turbines every month. We have no checks and balances for that at the moment. The feel is that we're somewhat behind that. Is that correct?

**Mr Duggan:** We've been monitoring, certainly on an annual basis. I think my response to the question was: we don't currently monitor daily, weekly or monthly, but on an annual basis for solar, for example, we've seen an increase year on year in the order of, in 2022, about 1½ gigawatts of solar—

**Senator CADELL:** Non-rooftop or all?

**Mr Duggan:** That's all solar, so both utility-scale and—

**Senator CADELL:** What about non-rooftop?

**Mr Duggan:** For rooftop solar, I don't have that split in terms of the increase last year in front of me. But, to give you a bit of a sense: for solar, 1.5 gigawatts added to the NEM last year. We need a pace of investment of about 0.7 gigawatts per year from here to hit the 83 per cent that AEMO projected for the Integrated System Plan. In fact, we've exceeded that 0.7 in each of the last five years. So, in solar, we've got the pace of investment we need. Where we don't have it at the moment is wind, so we do need to see an acceleration.

**Senator CADELL:** How far behind are we on wind at the moment?

**Mr Duggan:** We've had broadly, on average, about one gigawatt of wind capacity added in the last five years. We'd need that to increase to about three gigawatts of wind capacity per year.

**Senator CADELL:** There have been recent announcements by Snowy. I know they're here later tonight, but, with the department, confirming those dates, is Snowy 2.0 back to 2029? Is that correct? And what about Kurri? What are the first power and full power dates on those?

**Mr Duggan:** As you said, Snowy will be here to answer these questions in detail. In the Snowy 2.0 project update that Snowy put out on 3 May, they notified of delays to both first power and full commercial operation of

Snowy 2.0 by 12 to 24 months, so full commercial use of Snowy 2.0 is now expected to be between December 2028 and December 2029. And first power will be reached at 12 to 18 months before that, so either between June and December 2027, at the earliest, or between June and December 2028, at the latest.

**Senator CADELL:** What about Kurri?

**Mr Duggan:** There is no change to what had previously been communicated with respect to Kurri Kurri. AEMO issued an update on 23 January. In that update, the target commercial use date for Kurri Kurri remains 31 December 2024.

**Senator CADELL:** Will all the transmission lines be in place by the time of Snowy 2.0, to get full use of that?

**Mr Duggan:** All transmission lines or the ones that are relevant for Snowy 2.0?

**Senator CADELL:** Relevant for Snowy.

**Mr Duggan:** We have started to produce some of the underwriting agreements in order to bring forward some of the critical early technology applications that are needed for HumeLink and VNI West, which are the two transmission lines that run off Snowy 2.0. That's with the intention of meeting the dates in the Integrated System Plan around that critical transmission. That would have those two transmission lines come in—I'll get the dates for you.

**Mr Fredericks:** I stand to be corrected, but I think HumeLink is July 2026.

**Mr Johnson:** HumeLink's construction is currently scheduled to be completed in mid-2026, subject to regulatory approvals, and VNI West is currently targeting July 2030. However, that is subject to further decisions by the Victorian government.

**Senator CADELL:** Sorry, I didn't get that.

**Mr Johnson:** I said July 2030. However, the Australian government and the Victorian government announced an agreement late in October last year with a view to accelerating the delivery of that project to 2028, with the assistance of funding through the Rewiring the Nation program.

**Senator CADELL:** A previous employee was here—and I think we spoke in my first estimates here—who was surprised the government is no longer with Snowy Hydro. I think he recently said a term that's unparliamentary about the claims of getting to 80 per cent by 2030—that they are a colloquial term for male bovine excrement. The Snowy is running late, and Hydro is running late. We're not getting an uptake of wind. Why is it that someone who has been in the industry is doubting this? I know you said it's ambitious, but sooner or later ambitions becomes unachievable sometimes. I wish you all the best, but what is plan B?

**Mr Duggan:** Just to clarify, I did see the comments by the former CEO of Snowy Hydro Ltd. The 82 per cent, the government's target, is broadly in line with AEMO's 83 per cent, which they produced through the Integrated System Plan. They utilised a panel of energy experts to try and determine which of the different scenarios that they ran through the Integrated System Plan was the most likely given the government targets and its related policy framework. That panel of energy experts concluded that the step change scenario, which is the one that I mentioned—the 83 per cent—was the most likely scenario. I do respect that others have views, but the panel of experts used by AEMO supported the government's target.

**Senator CADELL:** The most likely outcome—I have no problem with that. If it's not that, what is plan B?

**Mr Duggan:** We are working with the government very hard to help them put in place a policy and regulatory framework that gets us to 82 per cent.

**Senator CADELL:** If that doesn't succeed, are there any meetings, consultations or programs at the moment looking at extending the life of existing coal or gas plants or looking at more gas plants?

**Mr Duggan:** Getting to 82 per cent will be a combination of increased renewable energy in the grid and some of the existing fossil fuel technologies exiting the grid between now and 2030. That's what's included in AEMO's Integrated System Plan. Ensuring that there is enough dispatchable firm capacity in the market as we make our way towards 2030 is absolutely a big focus of the government's policy agenda and a big focus of what we do. It's a big reason why they've undertaken \$20 billion worth of investment through Rewiring the Nation to bring more firm capacity that is geographically dispersed through variable renewable energy, and it's a big part of the Capacity Investment Scheme—to bring in more of that capacity. The combination of those things leads AEMO to come to the conclusion that, over the period between now and 2030, we're able to maintain a reliable electricity grid with that degree of renewable penetration.

**Senator CADELL:** That was the answer: 'Yes, getting 82 per cent renewables is easy; we just shut down everything tomorrow that is not renewable.' And we've done that; I see that point. Will that provide enough energy for the grid, and, if the 80 per cent doesn't provide enough, is the department having consultations with other states and stakeholders about extending the life of current coal and gas or building new ability for nonrenewable plants?

**Mr Duggan:** There was a body of work that was commissioned by the former New South Wales government that they were pursuing independently, but the Commonwealth and state energy ministers updated us through the course of last year and early this year around some thinking that they were doing around regulated exit of coal-fired power stations to deal with a scenario where you had a coal-fired power station that was integral to the grid exiting the grid sooner than the replacement capacity was in place. We received an update on that body of work at the energy ministers meeting in February. We've obviously had a New South Wales election since that period. It wasn't discussed at the energy ministers meeting that was held last week.

**CHAIR:** Senator Pocock?

**Senator DAVID POCOCK:** I've got some questions on the Pepper inquiry to start with.

**Senator McAllister:** Yes.

**Senator DAVID POCOCK:** Last Friday Minister Bowen said there was some work to go yet with meeting recommendation 9.8 of the Pepper inquiry. I'm wondering if you accept that recommendation 9.8 has not yet been met?

**Ms Evans:** There are two parts to recommendation 9.8 in the Pepper inquiry which is to do with offsetting the life cycle emissions of the Beetaloo gas field in Australia. The first part is that the scope 1 emissions associated with the Beetaloo will be regulated under the safeguard mechanism.

As you would be aware, there's a baseline of zero for direct emissions from the reservoir for shale gas, which would include Beetaloo. That deals with the scope 1 emissions. The scope 2 and 3 emissions associated with the Beetaloo have been referred to the Energy and Climate Change Ministerial Council process for consideration because those emissions are obviously associated with gas use, for the most part, in the eastern seaboard states, in particular, but more generally in the gas market in Australia. Work has started through the decarbonisation working group to talk about what steps will be put in place to make sure that the emissions associated with gas use, including from the Beetaloo basin, are properly dealt with. That's in the context of pretty much every single state and territory—Ms Rowley will correct me if I've got that wrong—now having a goal of achieving net zero emissions by 2050 or sooner. Those discussions are within that context.

**Senator DAVID POCOCK:** There's quite a bit to work out there, is what I'm hearing, and it's going to be a bit of a process to do that.

**Ms Evans:** That's right.

**Senator DAVID POCOCK:** Would you accept that claiming that recommendation 9.8 has been met in full is misleading, then, given there's this long process?

**Ms Evans:** You're asking me for an opinion, and all I can say is that there is a process in place.

**Senator DAVID POCOCK:** What I'm hearing is it hasn't been. In terms of scope 2 and 3, who is likely to pay to offset scope 2 and 3 emissions?

**Ms Rowley:** The work of the decarbonisation working group under the Energy and Climate Change Ministerial Council has just started, so I wouldn't want to speculate with respect to where that might land. Just rephrasing Ms Evan's comment, all of this work occurs within a context of all jurisdictions, including the Commonwealth, having emission reduction targets. To the extent that we're looking at what's the net increase in emissions in Australia of any development within the context of legislated commitments at the national level to bring emissions down over time to net zero by 2050. What we're doing through the ECMC decarbonisation working group is working with other states and territories to look specifically with respect to any future emissions from Beetaloo—noting that there are currently no specific projects seeking approval, let alone actually generating gas—what additional measures might be to address those emissions, if necessary.

**Senator DAVID POCOCK:** In those additional measures, are you considering just the use of ACCUs or other offsets as well?

**Ms Rowley:** It hasn't got to that point yet.

**Senator DAVID POCOCK:** Has there been no discussion of the types of offsets that can be used?

**Ms Rowley:** No, not at this time.

**Senator DAVID POCOCK:** Is there a timeline for that to be worked out in terms of the process?

**Ms Evans:** Not at this stage, but I do want to clarify that the process that we're going through with the decarbonisation working group is not just necessarily looking at offsets. It will also look at efficiency opportunities, the ability to reduce the amount of gas that's used in the first place. So there's a whole range of measures that will come into effect to achieve this concept of having net zero life cycle emissions from Beetaloo.

**Senator DAVID POCOCK:** In terms of delivering on that, are you concerned that we're hearing from the Northern Territory government that 9.8 is done, and they want to proceed with Beetaloo as soon as possible? I'm hearing from you that this is a process for which we still need to work out details. How does that potentially put our climate goals at risk?

**Ms Evans:** I think the Northern Territory government can feel confident that the decarbonisation working group will come up with a range of approaches that will deal with that recommendation, because that's what we have been asked to do.

**Ms Rowley:** I will add that, with respect to the implications for Australia's emission reduction targets, we will continue to implement the government's policies with respect to reducing emissions. As you know, the safeguard has been legislated, which speaks directly to the scope 1 emissions from Beetaloo projects. But it also speaks to the emissions from large industrial users of gas, because, through their own baselines ratcheting down over time to net zero by 2050, those emissions will also be directly addressed by the safeguard mechanism. Essentially, industrial facility scope 1 emissions are Beetaloo scope 3 emissions if that gas is sourced from the Beetaloo. There are already policies in place to drive reductions over time. We will continue to track our progress, including by looking forward towards those targets through our annual emissions projections.

**Senator DAVID POCOCK:** On Beetaloo, has the department modelled how much of that gas will be exported versus used for domestic supply?

**Ms Rowley:** With respect to the Australian emissions projections, where we take account of future developments of fossil fuels, including coal, oil and gas, we do make some specific assumptions about Beetaloo which reflect public statements, resources reports and things. Our working assumption at this time is that that would be supplied into domestic markets rather than go to export, but that will obviously be a function of decisions of the proponents at the time and of the relative demand in the domestic and global markets.

**Senator DAVID POCOCK:** So your current working assumption is that the whole of Beetaloo will come into the domestic market?

**Ms Rowley:** For the emissions projections report that we do, that gas, to the extent that it's developed—not for the full life of any potential project but for the purposes of the emissions projections—comes to the domestic market.

**Senator DAVID POCOCK:** Is that working on the Northern Territory government's 500 trillion cubic feet of gas? That's what I think they put it at. Is that what you're factoring in?

**Ms Evans:** I think the reality is that the gas field will take quite some time to come fully online, and then, in the initial period of time, at relatively small rates, it would be for domestic consumption. Then, as it grows, the objective for that field, as I understand it, would be to turn to exports.

**Senator DAVID POCOCK:** That's not what was just said, though—

**Ms Evans:** No, and that's consistent with the way we have reflected the initial phase of Beetaloo production. It is currently in the projections as being for domestic use. So it's the same.

**Senator DAVID POCOCK:** Are you able to table the work you've done looking at this? I'm hearing there's a staged approach where, very early on, it'll likely be domestic but then move into exports.

**Ms Rowley:** Sorry—could I just clarify that that's not what I said. The Australian emissions projections—

**Senator DAVID POCOCK:** I think that was what Ms Evans said.

**Ms Rowley:** run out to 2035. For that period, to the extent that there is gas supply from Beetaloo, the emissions projections are based largely on the assumption of that coming into the Australian domestic market. Because the projections only go out to 2035, we don't make assumptions about what happens post that period. That will be a function of the market's development over time.

**Senator DAVID POCOCK:** Have you modelled how it will get into the domestic market, in terms of getting that gas from Beetaloo into—I'm guessing—the east coast?

**Ms Rowley:** It would be to the east coast market, yes.

**Senator DAVID POCOCK:** How? I'm curious.

**Ms Rowley:** It would be through pipelines established between the project development and the east coast market.

**Senator WATERS:** I will stick with the most recent topic, because I've just been advised that Ms Tracey Winters from Santos—which is obviously one of the proponents for Beetaloo—told this committee that it's uneconomic to only provide to the domestic market. So, why is it that your assumptions out to 2035 are different to what Santos is saying?

**Ms Ford:** In putting together the emissions projection we make use of the best available information that we have at the time. So, in putting together the 2022 emissions projections, we used the information that was available. As Ms Evans said, Beetaloo is still in the exploration stage, so there is a level of uncertainty around things such as the level of production and where that might go. We are updating the emissions projections for this year, and we would be looking to publish those by the end of the year.

**Senator WATERS:** And you'll take into account that information from Santos and presumably a range of other sources?

**Ms Ford:** Yes, that's right. We will take into account a range of information in putting together the projections.

**Senator WATERS:** Just for clarity: you will update the projections and you'll publish that by the end of the year, and they will still pertain to a 2035 end date.

**Ms Ford:** That's correct.

**Senator WATERS:** I asked about it at the start of the day but was directed to ask it here, and since we've started talking about it anyway: from a governance perspective, has the Energy and Climate Change Ministerial Council now superseded the bilateral energy and emissions reduction agreements and governance processes?

**Mr Gaddes:** As you are aware, there were a number of bilateral agreements with states and territories under the previous government. A range of those measures were reconsidered in terms of the funding measures that were reconsidered through the previous budget, and those that aligned with current government's policies were taken forward and those that weren't were taken as saves. We are no longer servicing the governance arrangements for those. There were a range of governance arrangements in those agreements as well. We are no longer servicing the governance arrangements or providing reporting on those. Instead of that, we're proceeding with a range of bilateral and multilateral engagement through the energy and climate ministerial council, and a big part of that would be the National Energy Transformation Partnership. We're also doing a lot of work with states and territories bilaterally through the working groups that sit under that. An example would be the decarbonisation work, which we spoke about earlier, and the offshore wind working group. In my area, there is also the adaptation working group. So that's the primary vehicle for engagement with states and territories at the moment.

**Senator WATERS:** Thank you. That's nice and clear for me. When is the next meeting of the ECMC?

**Mr Gaddes:** I think they just met last week.

**Mr Duggan:** That would be in July in Devonport in Tasmania.

**Senator WATERS:** Sorry. I'm having trouble hearing. July, did you say?

**Mr Duggan:** July.

**Senator WATERS:** What date, please?

**Mr Duggan:** The 7th of July.

**Senator WATERS:** In relation to the scope 2 and 3 emissions from Beetaloo, which Senator Pocock was touching on, you said that the decarbonisation working group was working on policy proposals. Is it envisaged that they will have a legislative basis?

**Ms Rowley:** To clarify, the decarbonisation working group has just commenced looking at the issues around the broader lifecycle emissions from any future gas developments in Beetaloo, and we haven't yet settled on any particular agreement with respect to policy approaches or what those might be.

**Senator WATERS:** So is legislative delivery of the successful policy choice off the table?

**Ms Rowley:** No. I think it's that everything is on the table, but we haven't really defined what those things are yet. It's at the very early stages of discussions.

**Senator WATERS:** What time frame are you working on to complete that work?

**Ms Rowley:** There's no final time line for the work yet. As I said, it's at the earliest stages.



**Senator WATERS:** When will there be a final time line for the work?

**Ms Rowley:** It would be a matter for the group and then their advice to the ministers to determine. It's not determined at this point.

**Senator WATERS:** I have a number of other topics. Shall I start on some of those now?

**CHAIR:** We will go to our scheduled break. Thank you.

**Proceedings suspended from 12:14 to 13:15**

**CHAIR:** I would like to welcome back officers from the department in relation to programs 1.1 and 1.2.

**Senator WATERS:** Thanks very much, everyone. Can I go, please, to the Middle Arm project. I will go first to dates. I think I've just worked out that the public consultation on the draft terms of reference for the EIS under the strategic assessment is open currently and finishes on 10 June. Is that correct?

**Ms Evans:** I think you may be asking a question that's either for the environmental approvals area or for the department of infrastructure.

**Mr Fredericks:** It would depend on what your question is. What are you interested in?

**Senator WATERS:** I am interested in the purpose of the Middle Arm facility and what it's being built for. I was just going to clarify dates, but, if that's going to throw a spanner in the works, I'll park the dates and I'll go to the intent.

**Mr Fredericks:** I think Middle Arm is being done under the auspices of the infrastructure department.

**Senator WATERS:** Can I ask for the microphone volume to be turned up, please? Would you say that again, Mr Fredericks?

**Mr Fredericks:** Yes—I think Senator Pocock is answering!

**Senator WATERS:** I think it's probably more appropriate for you to answer. No offence intended!

**Mr Fredericks:** My understanding is that it's in the infrastructure department.

**Senator WATERS:** I see. So there's no oversight from this department whatsoever?

**Mr Fredericks:** Yes.

**Senator WATERS:** That's interesting. I will take it up with them. Thank you for that clarification.

**Mr Fredericks:** I was going to say just one thing. You just said then—and I was just chatting; I do apologise—'There's no oversight by this department.' I've just got to be careful I don't leave that unanswered.

**Senator WATERS:** Sure. You know more than me about who's in charge of what.

**Mr Fredericks:** The development is within the responsibility of the department of infrastructure. That's unambiguous—

**Senator WATERS:** They're running the strategic assessment under the EPBC Act, which would normally sit with your department?

**Mr Fredericks:** No. That's what I was going to come to. There will be elements where it intersects with our department.

**Senator WATERS:** Yes, I would hope so.

**Mr Fredericks:** One of them will be the EPBC Act, and that is in outcome 2, when the environmental assessment group turn up tomorrow.

**Senator WATERS:** Great.

**CHAIR:** Essentially, different elements of that project are the responsibility of different departments?

**Mr Fredericks:** Yes.

**Senator WATERS:** I'm following that, and I'll come back tomorrow with that specific question about proponents that have expressed interest. So that's definitely outcome 2 tomorrow?

**Mr Fredericks:** Yes.

**Senator WATERS:** Thank you. Can I move on now, please, to why Visy has no facilities under the safeguard mechanism? The reported emissions that I've got here for Pratt Consolidated Holdings were very large at 717½ thousand tonnes of CO2 equivalent. Why does the public have no oversight of their emissions at a facility level?

**Ms Rowley:** The safeguard mechanism applies to industrial facilities that have annual emissions of 100,000 tonnes of CO2 equivalent per year. So, if Visy has a variety of different facilities which are not part of a single-facility operation, then it might be that their facilities are below that threshold and are therefore not covered.

**Senator WATERS:** Do you know how many facilities Visy do have?

**Ms Rowley:** No, I don't.

**Senator WATERS:** Okay, but you're saying, by a point of logic, they would all have to be under 100,000 in order to be—

**Ms Rowley:** If they're not covered by the safeguard facility, they would need to be below that threshold each year.

**Senator WATERS:** Okay, thank you. Section 25 of the NGER Act allows companies to request that information not be published if the information reveals trade secrets or commercial-in-confidence matters. Do you know if that exemption has been applied to any of Visy's facilities?

**Ms Rowley:** I don't know.

**Senator WATERS:** Would you be the person that should know or is there someone else?

**Ms Rowley:** If it relates to their emissions reporting under the NGER Act, then it may well be the responsibility of the Clean Energy Regulator who administers that act and who could advise on whether any exemption requests have been received.

**Senator WATERS:** So the department doesn't track the exemption—we think that's CER's bag?

**Ms Rowley:** The regulator administers that act.

**Senator WATERS:** If I want to know the number of facilities and the emissions associated with each facility, who do I ask to get the answer to that?

**Ms Rowley:** If it's for safeguard facilities, then they're all listed on the Clean Energy Regulator's website. They maintain a public database which is updated each year with NGERs reporting by facility and presenting the aggregate emissions. You might be aware that, as part of the recent safeguard reforms, additional information will be published in the future which gives greater granularity of that information for each facility.

**Senator WATERS:** Thank you. I'll take that up with them. Has the government secured the support of Pacific island leaders in the bid to host a COP?

**Ms Munro:** The short answer is yes. At the Pacific Islands Forum last year, it was warmly welcomed by all Pacific Islands Forum leaders.

**Senator WATERS:** Do you need any further negotiations or do you consider that a tick-off?

**Ms Munro:** It has been ticked off in that sense. What is important, though, is the engagement with Pacific island countries as we put forward that bid to host the COP and to ensure that that is a mutually respectful relationship in terms of how we go ahead with that bid.

**Senator WATERS:** Would you describe it in that fashion?

**Ms Munro:** Yes, I would.

**Senator WATERS:** Given that many of the Pacific island leaders are strongly opposed to opening new coalmines because it threatens the very existence of their countries and their food-producing land, is that presenting challenges in the ongoing collaboration?

**Ms Munro:** As I'm saying, it has been supported by all Pacific island countries, and they really do see the opportunity for Australia working with the Pacific hosting a COP in 2026.

**Senator WATERS:** Have any of them privately raised with the government their concerns about opening new coalmines?

**Senator McAllister:** I think they've publicly indicated their views about fossil fuels generally, so it's not really a question of private indications. It is their publicly stated view.

**Senator WATERS:** Have they also repeated that view privately?

**Senator McAllister:** I'll take that on notice, Senator Waters.

**Senator WATERS:** Has Australia been invited to the UN Climate Ambition Summit in September?

**Ms Munro:** As I understand it, there have actually been no invitations as yet issued for the summit, but I can take that on notice.

**Senator WATERS:** Do you know if there's a time frame when invitations would normally be issued?

**Ms Munro:** The summit will be in September—

**Senator WATERS:** It's getting pretty close.

**Ms Munro:** so usually it does come a little bit later in the year. I would have to take that on notice.

**Senator WATERS:** Are you expecting that we'd be invited to that?

**Ms Munro:** The actual scope and purpose of that summit is still being determined, as I understand it, by the UN Secretary-General. We are in regular contact with the UN Secretary-General's deputy and his office on these issues, so we are continuing to work very closely with the UN Secretary-General and his office on these issues.

**Senator WATERS:** I was led to believe that the price of admission, if you like, was to make sure there was no new coal and gas. Has that cropped up in your discussions with the Deputy Secretary-General.

**Ms Munro:** No, that has not been raised with us directly.

**Senator WATERS:** In relation to the drafting of the safeguard regulations, when will the formulas be set for international best practice? How are you triaging all the various new entrant industries?

**Senator McAllister:** I'll ask Ms Rowley to talk you through that timetable now.

**Ms Rowley:** This relates to the emissions intensity baselines for new facilities coming into the safeguard mechanism, so new entrants will be subject to international best practice baselines. We're developing work for further public consultation at the moment with respect to our structured approach to defining international best practice, and we envisage that the values will be set by the end of this year. In particular, going to your question of triaging, we're prioritising the production variables where we know or anticipate that there will be new entrants in the relatively near future. There are some production variables among the many, many production variables we have under the mechanism where we don't have any expectation of new projects, but there are others where we do.

**Senator WATERS:** Can you give me an example of a production variable that you're expecting there will be new industries for?

**Ms Rowley:** They're things like LNG developments, because there are some that have achieved final investment decision. Similarly, we anticipate that in the near term there might be lithium developments or possibly even hydrogen developments. They're the kinds of things that we are prioritising.

**Senator WATERS:** When will the new coal and gas fields be set? Is that part of that same process?

**Ms Rowley:** Yes. International best practice guidance for new fossil fuel developments is part of the same process.

**Senator WATERS:** So end of the year. Have any of your preliminary investigations revealed that some of these new coalmines or gas fields would exceed the standards from the oil and gas partnerships or the met coal partnership?

**Ms Rowley:** I know that we're looking at that as part of our work, taking those partnerships in particular into account in the development of those international best practice baselines. But we're still at a relatively early stage in that work, so I couldn't speak to the specifics of how it would compare.

**Senator WATERS:** Okay. There's an Italian oil and gas company by the name of Eni that has recently announced that it intends to go ahead with the Verus gas project—which was previously called Evans Shoal—off the coast of Darwin later this year. Is that a project that the department views as happening soon and likely to be a new entrant? I don't think it's been factored in yet. That's why I'm asking whether it will be considered a new entrant and factored in.

**Ms Rowley:** I'm not aware of that. I might need to take it on notice.

**Senator WATERS:** I think that's actually it for me for outcome 1.1, which is incredible!

**CHAIR:** Fantastic. We'll go to Senator Hughes.

**Senator HUGHES:** I would like to ask a couple of questions with regard to the bill relief payment of up to \$500 that was announced in the budget.

**Senator McAllister:** Sorry, Senator Hughes, I'll just clarify that the program is a shared responsibility between us and Treasury because it's being, obviously, jointly led. But please go on.

**Senator HUGHES:** Okay. I just wanted to confirm that it was a one-off payment, but also how people that were going to be eligible for it was being determined—who's going to be covered.

**Mr Duggan:** I'll ask Mr Whelan to answer that question for you, Senator.

**Mr Whelan:** In terms of the regularity of the payments, it will differ between states and territories, it's my understanding. So I'm not sure that that is completely settled at this point. In terms of eligibility, it is generally

those electricity consumers who are already receiving rebates from states and territories, as well as those who would be eligible to receive family tax benefit payments.

**Senator HUGHES:** Both A and B?

**Mr Whelan:** I believe it's A and B, yes, but I'll have to confirm that and come back to you.

**Senator HUGHES:** So it's predominantly people who are already receiving some form of welfare payment, yes?

**Mr Whelan:** Sorry?

**Senator HUGHES:** It's people who are receiving a welfare payment of one sort or another.

**Mr Whelan:** That's true in general.

**Senator HUGHES:** Okay. Do we have any idea how many Australians that is?

**Mr Whelan:** I don't have that information here. I'll have to take that on notice.

**Mr Duggan:** Senator, I can tell you that more than 5.5 million households and one million small businesses are expected to benefit from the energy rebates.

**Senator HUGHES:** But we're still working out exactly how that's going to be determined?

**Mr Duggan:** Those details have been determined. They've been negotiated between treasurers, so Treasury would be better placed to give you all the details. As Mr Whelan referred to, it's actually quite complicated because it does differ by jurisdiction, so there are eight different bilateral agreements.

**Senator HUGHES:** So it's not that everyone is going to get \$500; it's going to be up to \$500, depending on what state you're in and perhaps what category you're in?

**Mr Duggan:** Broadly, it's \$500. I can take you through, by jurisdiction, broadly what level of assistance a household is eligible for if that would be useful.

**Senator HUGHES:** Yes.

**Mr Duggan:** In New South Wales, Queensland, South Australia and Tasmania, the total bill relief is \$500 per eligible household. In Victoria, it's \$250 per household plus a one-off \$250 direct payment through Victoria's power savings bonus payment. Again, these are shared fifty-fifty with the states and territories in terms of the financial cost.

**Senator HUGHES:** So Victoria's fundamentally \$500, or are there two payments of \$250 from different payment sources?

**Mr Duggan:** That's right: \$250 for the bill relief from the Commonwealth plus a \$250 direct payment from Victoria through their power savings bonus payment. In Western Australia and the Northern Territory, the total bill relief is \$350 per eligible household. In the ACT, the bill relief is \$175 per eligible household. I could go into the small-business bill relief as well if that's of interest.

**Senator HUGHES:** Yes.

**Mr Duggan:** For the small-business relief, New South Wales, Queensland, Western Australia, South Australia, Tasmania and the Northern Territory are providing co-contributions of \$325, so what we're seeing there is a total bill relief of \$650 per small business. The ACT is itself lowering electricity tariffs for all businesses through its large-scale feed-in tariff scheme. The level of relief to businesses in the ACT varies depending on electricity consumption. Based on the average electricity consumption, the estimate is that an ACT business would receive relief of \$624 each year in addition to the Australian government's contribution of \$325. So, if you add those two things up, it's about \$950.

**Senator HUGHES:** When these packages were being put together—we know there are lots of lenses applied to different policies in how they're going to play out, such as gender et cetera—were there inflationary pressure lenses put on this measure? Was it going to be inflationary? What was the impact going to be? Also, we know that with inflation at the moment, the best antidote to that is productivity. Is there a productivity lens applied to any of these programs in how it's going to contribute to both productivity and reducing inflation?

**Mr Duggan:** Inflation was a significant lens in the design of these payments. The way they'll be provided is that, at the point where a consumer receives their electricity bill, effectively what they will pay will be the total bill amount less the rebate. The way that's taken into account in the first round by the Australian Bureau of Statistics, when it calculates the CPI, will be to bring down the price of electricity in the CPI. So it has a direct deflationary impact in the measurement of inflation.

**Senator HUGHES:** For the 5.5 million households?

**Mr Duggan:** That's correct.

**Senator HUGHES:** Has there been any analysis? I'll give you an example. I got my power bill on the weekend, and AGL let me know that my power bill is now 58 per cent higher than it was at this time last year. That's come from the power company. Is this reduction going to be enough, when you talk about the CPI, to actually counter the significantly higher increases that all other households are still going to have on their power bill?

**Mr Duggan:** Senator, you'll recall that this was one of a number of measures that were put in place to decrease power bills.

**Senator HUGHES:** Yes.

**Mr Duggan:** At the end of last year, the government announced coal price caps and gas price caps, both of which were intended to bring down wholesale electricity costs. What we saw out of those interventions was that the forward price for wholesale electricity prices fell quite significantly for next financial year.

**Senator HUGHES:** Well, the increase was estimated to be less. There wasn't going to be negative growth.

**Mr Duggan:** That's right. In terms of the impact, you could see, in terms of the futures price for wholesale electricity prices for the next financial year, which is when the interventions are estimated to have their largest impact, we actually did see a fall in the wholesale futures price. You're right: that fall was in the context of what had already been an increase preceding that. In a sense, it reduced the extent of the increase, so it does take pressure off the increase in electricity bills next year. Treasury estimated that those wholesale interventions would save the average household, on average, about \$230. The consumer rebates come on top of that. Notwithstanding that, the draft default market offer the AER released a couple of months ago now still referred to price increases in the order of about 15 to 20 per cent, depending on which jurisdiction you're in. These bill rebates will detract from that 15 to 20 per cent increase, so—

**Senator HUGHES:** On a one-off occasion.

**Mr Duggan:** For the next financial year; that's correct.

**Senator HUGHES:** It's a one-off payment.

**Mr Duggan:** Yes. It's one financial year's worth of payments; that's correct.

**Mr Fredericks:** Senator, just to your inflation point, I should note that my understanding is that Treasury expects that the total effect of the Energy Price Relief Plan, the various elements of which Mr Duggan referred to, will reduce inflation by 0.75 percentage points in 2023-24.

**Senator HUGHES:** That's based on power prices at the time of the budget?

**Mr Duggan:** It's based on the estimate that Treasury undertook early this year that, in the absence of any government intervention, we would have seen electricity price increases nationwide—

**Senator HUGHES:** Just so I understand—and I'm sorry to interrupt—towards the end of last year it was predicted that power prices were going to go up by, I think, 56 per cent, and now they're predicted to go up by 36 per cent. So we're still seeing an increase; we're just seeing an estimated increase of 20 per cent less.

**Mr Duggan:** Yes. Nationwide, Treasury's estimates were that next financial year, in the absence of the interventions, we would have seen a 36 per cent increase in retail electricity prices. Due to interventions, Treasury are now expecting to see a 10 per cent increase. So the interventions have taken 25 percentage points off the increase.

**Senator HUGHES:** Right. But they're still increasing.

**Mr Duggan:** Yes. Nationwide, they will increase.

**Senator HUGHES:** So what are the plans going forward to actually reduce power prices? We're consistently told that, as a result of getting more renewables into the market, it's going to be cheaper and that this is going to help households across the board, not just those eligible for the payment. But, at the end of the day, it all comes down to supply and demand. So what is the plan to make sure that there is enough supply in the domestic market and that those prices will come down in real terms?

**Mr Duggan:** You refer to getting more renewables into the system. That's a market driven outcome, because renewables are currently the lowest cost source of marginal generation in the system.

**Senator HUGHES:** But they're also the lowest cost, in the sense that they're highly subsidised by government. There are very few projects that aren't getting a nice, big government handout to make them work. And then we're going to have \$100 billion to rewire the nation, and that doesn't seem to be factored into the cost of renewables.

**Mr Duggan:** I would say that there are very strong economic drivers that exist within the market to drive towards renewables. As I said, when you look at renewables, when they are setting the price in the national electricity market, for example, it is at near zero that they set that price. Obviously, they're not producing 24 hours a day, seven days a week, so that is not the price that exists every day, but it is the price that exists for that new marginal source of generation. So the economics is driving towards greater renewable penetration over time. The government's policies are facilitating that in a way that aims to firm those renewables, as you referred to, through rewiring the nation and greater geographic diversity. That's a concessional loans program, the benefits of which are passed through directly to lower consumer bills. But there are also things like the Capacity Investment Scheme, which, again, is designed specifically around firming up dispatchable generation so that we can get more low-cost renewables into the system.

**Senator HUGHES:** So it is looking to renewables to firm up the system. Is there a chance that we're going to see, perhaps, a lag time where renewables aren't able to firm the system, we don't have the infrastructure in place and the storage facilities don't exist, yet we're seeing a winding down of coal and gas, the PRRT and price caps making it more difficult for new entrants coming into the market? All of those are limiting supply, potentially, of traditional fossil fuel energy. Is it possible that we're going to look at a situation, even this winter, where we're going to see brownouts or move towards rolling blackouts whilst we're waiting for this renewable transition to actually materialise?

**Mr Duggan:** The Australian Energy Market Operator examines this very closely. It has made an assessment of this winter and it has made an assessment of the upcoming summer. Its assessment is that we don't face a high probability that we will see shortages of power heading into—

**Senator HUGHES:** Hang on. There are a lot of double negatives and positives. Are we likely or are we unlikely to—

**Mr Duggan:** We are, according to AEMO, very unlikely to experience a shortage of electricity this winter. That is their assessment.

**Senator HUGHES:** What about this summer?

**Mr Duggan:** Similarly for summer. One of the things they point to is that of course we are entering different climatic conditions going forward. We are no longer in a La Nina; we're entering into an El Nino-type pattern. Over summer, that can put more pressure on the electricity system, but AEMO's modelling would suggest that we're actually pretty well placed heading into the upcoming summer as well, in terms of the capacity for our generation to meet demand.

**Senator HUGHES:** I'll leave it there, because I could go for a while.

**CHAIR:** We'll definitely come back to you. Senator Thorpe on video conference.

**Senator THORPE:** Thank you very much, Chair. My question is around fracking in the NT, particularly the operations that are happening at the moment and the fact the Labor government has confirmed it has adopted all 135 recommendations of the Pepper inquiry. Is that correct, in terms of the government's position on the Pepper inquiry?

**Ms Evans:** Senator, I think it is the Northern Territory government that is the subject of the Pepper inquiry and has responded to the series of recommendations. I'm not sure which position you're seeking for us to confirm.

**Senator THORPE:** They've responded in terms of adopting the 135 recommendations. Are you aware of that?

**Ms Evans:** My understanding is that the Northern Territory government has done that.

**Senator THORPE:** Is it the government's view that fracking operations should only continue if and when all recommendations of the Pepper inquiry have been adhered to?

**CHAIR:** Senator Thorpe, can I ask you to clarify. Obviously, this is the federal department in front of us. The department in front of us can talk to matters of fact relating to the NT government, but if can you just clarify which layer of the government you're asking, that would be really helpful.

**Senator THORPE:** Sorry for the confusion. The question is around whether you're aware of the recommendations and the fact that the Northern Territory government have taken on those recommendations and also around whether fracking operations should continue, given the recommendations from the Pepper inquiry. Does the federal government take any notice of the Northern Territory's response to the recommendations of the Pepper inquiry? There are parts that do relate to the federal government.

**Senator McAllister:** Perhaps I can assist in this way. In 2018, the Pepper inquiry released their final report. As you say, there were 135 recommendations, and they were made to the Northern Territory government. My

briefing indicates that the Northern Territory government then accepted all of those recommendations and lifted the moratorium on unconventional shale gas developments in the Northern Territory. They have, I understand, been going through a process of implementation, but there are a number of matters that do relate to the Commonwealth government, where the previous government committed to assisting the Northern Territory with implementation and our government similarly has committed to assisting with that. As I know you know, during the safeguard mechanism discussions we agreed to refer the question of scope 2 and scope 3 emissions from the Beetaloo basin specifically to the energy ministers, because it is something that needs to occur across jurisdictions. There are also particular provisions in relation to scope 1 emissions from shale gas production.

**Senator THORPE:** Thank you, Minister. One of the recommendations, recommendation 7.3, is for the federal government to establish a water trigger in the EPBC Act. Was it the government's intention that fracking activities in the Northern Territory would not move into production until this had occurred?

**Senator McAllister:** The water trigger is being contemplated as part of the broader law reform agenda that Minister Plibersek is undertaking. I understand you're not asking me about the specifics now; the officers associated with that will be available tomorrow to answer questions about implementation of that water trigger as part of the EPBC reforms.

**Senator THORPE:** One of your own MPs from the Northern Territory, Marion Scrymgour, is concerned that the Pepper recommendations are not being adhered to, traditional owners are being ignored and there are still questions about the federal government implementing a water trigger and ensuring that projects are net zero. Do you think that this member has good reason to be concerned about complying with the Pepper recommendations and that traditional owners are actually being ignored?

**Senator McAllister:** I have the highest regard for Ms Scrymgour, so I am not going to offer comment on her public statements. She's a very active and involved local member, and I'm unsurprised that she's engaged in this debate. What I can say in relation to the water trigger is that it is being contemplated as part of the broader law reform agenda being pursued by Minister Plibersek. It's probably not one for questioning in this part of the estimates program, but I can tell you that it is underway and that commitment has been made very clear in the agenda established by Minister Plibersek.

**Senator THORPE:** Under the land rights legislation, First Nations land rights holders must be consulted prior to the issuing of exploration permits. Are traditional owners required to be consulted when activities move from exploration to production?

**Mr Fredericks:** I'll have to take that on notice. I have a sneaking suspicion that that's a question for the resources department rather than the energy department. If that's not the case, I'll come back to you on notice on that, but if it is we will refer it to them.

**Senator THORPE:** Thank you. I'll keep going. The NT Chief Minister stated recently that the TOs have no rights. In your understanding, do traditional owners have veto rights over fracking on their country, including when moving—sorry; that's what you're giving me on notice.

**Mr Fredericks:** Yes, I think that's right.

**Senator THORPE:** I beg your pardon. Last one: one thing you could do is put a halt on production until a water trigger is established and you are confident that traditional owners have given consent for fracking to continue. Would the department consider halting activities until a proper process is undertaken?

**Mr Fredericks:** I think it's important to note at the start that no application has been received by the department in relation to any development in Beetaloo yet. When an application was received, we would, obviously, decide that application according to law as we would need to. To be really honest with you, until we get to that point, I'm a bit nervous about dealing with a hypothetical.

**Senator THORPE:** We've got the megafraacker sitting there and waiting, and there are traditional owners who are quite concerned about country. I have been to the Beetaloo and I have spoken to traditional owners, and they're very worried about the protection of their cultural heritage and water. The government has lied to traditional owners and let them down on commitments. What urgent action can the government take now for traditional owners in the Northern Territory?

**CHAIR:** Senator Thorpe, it is very difficult for the department to talk in a hypothetical. They don't have an application in front of them. Therefore, without an application, nothing is going to happen anyway. So the point at which an application is put in is the point at which they would consider what that application looked like. But they have nothing on hand.

**Senator THORPE:** I suppose I am also referring to the fact that traditional owners, regardless of whether or not an application is in place, are saying that they have been ignored throughout this process and that free, prior and informed consent wasn't obtained. How is the federal government going to support those traditional owners to halt any further fracking until proper—

**CHAIR:** Senator Thorpe, I'm terribly sorry but you dropped out at the very end of your question.

**Senator THORPE:** Basically, it's around free, prior and informed consent. Given the government's agenda is about the voice and making sure Aboriginal voices are part of what we're doing in this country, there are many clans and nations from the Northern Territory who don't want their country fracked and want to know what the federal government is doing about it? How is the federal government supporting those traditional owners who don't want this to happen?

**Senator McAllister:** Thanks, Senator Thorpe. Perhaps I can say two things. One is just to reiterate the advice I have already provided, which is that we are committed to introducing a water trigger. Minister Plibersek has made that very clear. That was one of the many recommendations made in the Pepper review.

The second thing is that, should an application come before the minister in relation to any project in the Northern Territory, under the EPBC Act, the government would consult as we ordinarily would with all of the stakeholders. This government will, of course, be very interested to hear what First Nations communities have to say in that process of consultation.

**Senator THORPE:** Thanks, Chair. I have no further questions.

**CHAIR:** Thank you Senator Thorpe.

**Senator DAVID POCOCK:** I have a few more on Beetaloo. You mentioned that you had done some modelling out to 2035. I am interested in the underlining assumptions about why it would be domestic until 2035?

**Ms Rowley:** I was referring to Australia's emissions projections, which is an annual report that we produce looking at Australia's emissions and how they are tracking towards our targets and beyond. In the context of compiling those emissions projections, we look at the domestic production and demand and export demand for fossil fuels and for other resources which are emitting activities. For LNG exports, there's a series of assumptions we make to populate the projections for meeting anticipated export demand and then there is also domestic supply and the projects that could supply the domestic markets, essentially come online, up to satisfying that domestic demand. I will see if my colleague would like to add to that. But, essentially, we look at the different sources of supply, existing projects and new projects, particularly those that have achieved final investment decision. We look at domestic demand and international demand and we allocate between them up to the expectations of what the resource outlook looks like.

**Senator DAVID POCOCK:** Are you able to provide on notice a copy of your modelling?

**Ms Rowley:** Our emissions projections are published every year and the most recent projections were published in December last year. As Ms Ford indicated earlier, the next ones will be published by the end of this year. So that's already in the public domain.

**Senator DAVID POCOCK:** It includes the assumptions around Beetaloo?

**Ms Ford:** I've got a copy of the emissions projections in front of me. The key thing, as Ms Rowley said is that, when we think about estimating emissions from domestic gas supply, we take into consideration expectations about the demand for domestic gas, and that includes information from the Australian Energy Market Operator, taking into account the demand that might come from domestic consumption of gas related to electricity generation and the like. In the 2022 emissions projections, we did assume that Beetaloo would be supplying the domestic gas market.

**Senator DAVID POCOCK:** When will it start supplying gas to the domestic market?

**Ms Ford:** We had Beetaloo coming on from 2025.

**Senator DAVID POCOCK:** Wow! I was looking at the industry website, and that had a couple of years for exploration, two to three years for appraisal, four years to start of ramp and then production after that.

**Ms Ford:** When I said it's coming on from 2025, I think that refers to when it's moving from that exploration stage into a production stage. I'd have to check with the team as to the extent to which it's supplying the domestic market. The assumption is that there is a slow build-up to supply.

**Senator DAVID POCOCK:** Are you able to give us the volumes from 2025 to 2035 as part of your—

**Ms Ford:** I don't have those with me.

**Senator DAVID POCOCK:** Maybe on notice?



**Ms Ford:** That's something that we'll need to take on notice, yes.

**Senator DAVID POCOCK:** Thank you. I will move to climate adaptation and risk. I'm interested in learning who's going to undertake the work to develop the National Climate Risk Assessment and the national adaptation plan.

**Mr Gaddes:** As you're aware, Senator, there has been an investment in adaptation and risk work in the most recent budget. Our plan at this stage is to go through and engage with states and territories and aggregate all of the information that they've got. They've quite advanced some of those in the risk adaptation work that they've got already on hand, particularly Victoria. We will then go and create a pilot risk assessment. We're in that stage right now. Following that, we'll do a stage 1 qualitative high-level risk assessment and then a stage 2 quantitative risk assessment. In terms of who will develop that, we're working with the Australian Climate Service, which is a part of the Bureau of Meteorology. It's an aggregate between the Bureau of Meteorology, CSIRO, Geoscience Australia and the Australian Bureau of Statistics. The funding that we've got in the budget will largely go to the Australian Climate Service to help work with us and development the risk assessment. In terms of the national adaptation plan, that funding comes to the department, and we'll use the outputs from the climate risk assessment to develop the national adaptation plan.

**Senator DAVID POCOCK:** All of that will be completed in the two-year funding period?

**Mr Gaddes:** Yes. We anticipate that this will be something that we'll need to do on an ongoing basis. We currently have funding to do it for the first two years to scope it up and do the first plan, but we're in a warming world and we are already seeing the impacts of climate change, so we suspect that we will need to scale up the project and then repeat it in a periodic way.

**Senator DAVID POCOCK:** This question is to Senator McAllister. I was looking at a report from the Insurance Council of Australia. They are saying that, by 2050, Australians will incur direct costs of \$35 billion a year due to climate change. The government is setting up the risk assessment and the national adaptation plan and we're hearing that it's going to be an ongoing project. Why is it funded for only two years?

**Senator McAllister:** Well, let's start with the need for it. There really has been—

**Senator DAVID POCOCK:** Sorry, I understand the need for it. It's just: why isn't it a longer-term commitment if there is such a huge need for it?

**Senator McAllister:** The funding that's been provided will allow the government, for the first time, to undertake a national risk assessment. That hasn't been done before. The costings in the budget reflect our assessment of the resources required to do that risk assessment. The expectation, as the officer has explained to you, is that it will allow us, I guess, to identify the areas of most significant risk and that those will feed into a national adaptation plan that will help the community to understand the most significant risks to Australia and therefore the areas of greatest need for investment in any response.

**Senator DAVID POCOCK:** So there'll be future funding?

**Senator McAllister:** Part of it is working with the states and territories, because adapting to climate change is not something that will be funded exclusively by the Commonwealth government. In fact, over the last decade, while the Commonwealth government was not very involved in this area, states and territories, local government, private asset owners and finance companies like the companies that you referenced earlier have been engaged in understanding their own risk and commencing responses. Our hope is that, by having a national risk assessment, we'll be able to draw on a lot of the work that's already been done but present a national picture. If further investments are required then the government would consider them at that time.

**Senator DAVID POCOCK:** Thank you. Talking about future climate risk, I'm interested to learn about the future gas strategy, if someone can help me with that. I'm just interested: what is the future gas strategy?

**Mr Duggan:** Minister Madeleine King, as the Minister for Resources, is the lead minister for that, so it would be best to put that question to the Department of Industry, Science and Resources.

**Senator DAVID POCOCK:** Okay. So your department will have no oversight over that strategy?

**Mr Duggan:** The Department of Industry, Science and Resources will have oversight. We'll, of course, participate in the interdepartmental committees that will help to form the future gas strategy, but leadership is through that other department.

**Senator DAVID POCOCK:** I'm curious as to why you don't know more about the future gas strategy. It seems—

**Mr Fredericks:** Senator, to be fair, I don't think Mr Duggan is saying that. The fact is that responsibility for the development of that gas strategy lies with the Department of Industry, Science and Resources. It's a resources issue. It's just the demarcation of government.

**Senator DAVID POCOCK:** Okay. Have you been directly—

**Mr Fredericks:** We will work closely with them as that gets worked through, but at this stage I think the answers to the questions that you're asking would be best coming from the resources department.

**Senator DAVID POCOCK:** Okay. Have you received a briefing on the future gas strategy from the other department?

**Mr Duggan:** We have been involved in interdepartmental conversations about the objectives and broad direction of the future gas strategy, very consistently with what's been stated by the minister publicly on that. Again, there is not much more I can add beyond that at this stage.

**Senator DAVID POCOCK:** Okay. Thank you.

**CHAIR:** We'll go to Senator Rennick.

**Senator RENNICK:** Hi, guys. My question is to Mr Duggan. You just said to Senator Hughes before that renewables are cheaper. Have you got models for that? Have you got costings for that right through to 2030?

**Mr Duggan:** Senator, you'll be aware that AEMO and the CSIRO do a report called the *GenCost* report where they look at the levelised cost of different forms of technology for producing electricity. In that report, which they've been undertaking since 2018, they've consistently found that in Australia's context, with our abundance of renewable energy options, variable renewable energy is a cheaper source of energy than coal in terms—

**Senator RENNICK:** Are you aware that didn't take the cost of recycling into account in that *GenCost* report?

**Mr Duggan:** I'm aware that every year that they produce that report they open up and ask for feedback on methodology and approach, because they're always—

**Senator RENNICK:** Sorry, I haven't got a lot of time. Are you aware that they don't take into account the cost of recycling in that report and that the head of the CSIRO has formerly told me in estimates that the amount it costs to recycle a lithium battery is three times the cost of the metals that go into it? Are you aware of that—yes or no?

**Mr Duggan:** I wasn't aware of that specific fact—no, I wasn't—but it sounds like you're well briefed from the head of the CSIRO.

**Senator RENNICK:** Are you also aware that they assume that the life of a coal powered station is 30 years, not 50 years, so they use the life of the loan, not the actual life of the power station? There are some serious flaws in that, and there have been flaws in their nuclear costing as well. So I think you should qualify it before you just say renewables are cheaper. I'll also note that, last time I spoke with CSIRO, their costing to go to 100 per cent renewables has fluctuated from \$1 trillion to \$500 billion. That's a 100 per cent margin of error. So, yet again, could you please qualify, any time you say renewables are cheaper, what you're backing that up with?

**Mr Duggan:** Senator, can I have the opportunity—

**Mr Fredericks:** Can I respond to that. In fairness, when you asked Mr Duggan to clarify, he cited the source of his evidence as the *GenCost* report, so that's entirely appropriate. To be fair, I've seen you in my old portfolio raising these questions, and I know that you have raised issues around the *GenCost* and the assumptions. It's perfectly legitimate, but, at the end of the day, Mr Duggan was giving evidence sourced on the basis of the *GenCost* report. That's accurate evidence.

**Senator RENNICK:** No; they're assumptions. I question those assumptions.

**Mr Fredericks:** I'm saying that the fact that there are differing views about the assumptions that underlie the *GenCost* report—

**Senator RENNICK:** It's not a view; it's a fact. If they don't take into account the cost of recycling, that's fact. That's not an assumption or anything. It's a fact that they don't take into account the cost of recycling. If we're here to protect the environment, we need to recycle these renewables at the end of their life. Do you not agree with that?

**Mr Fredericks:** Senator, my point is that you've raised issues that you have with the assumptions that underlie the *GenCost* report. That's legitimate. At the end of the day, it is legitimate for Mr Duggan to give evidence which reflects the outcomes of the *GenCost* report.

**Senator RENNICK:** Okay. That's fine, and that's commentary, so we'll keep moving on. I note that we've spent—

**CHAIR:** Senator Rennick, there's a difference between wrong and a difference of opinion. I think the point is that the GenCost report—which you have issues with, and that is totally fine—does actually lay out quite clearly its assumptions, so there's no smoke and mirrors in there, just to be very clear.

**Senator RENNICK:** Yes, except that he never qualified where he says renewables are cheaper in the first place. So, if you're going to say it, say, 'Renewables are cheaper, based on the CSIRO report that has the following assumptions.' That's how you actually report this stuff. I come from the finance industry, where we do this sort of stuff all the time.

**Mr Duggan:** Senator, I can add to my evidence if—

**Senator RENNICK:** No. I'll move on to the next question.

**CHAIR:** I think that would be useful, Mr Duggan. I'll give you time to continue, Senator Rennick, but, Mr Duggan, if you could, please further qualify.

**Mr Duggan:** The other data point that I would bring to bear on the question that you ask is what we observe from the prices that different sources of generation bid into the National Electricity Market. There we see variable renewable energy bidding in at zero or very close to zero marginal cost. That is the lowest marginal production source of electricity into the National Energy Market. For coal, obviously the input costs of coal constrain the extent to which they can meet or match those bids on a competitive basis. There is a coal price today of about \$140 for the 5,500 calorific—

**Senator RENNICK:** Okay. Thanks for that—because, in the Finkel report, it was shown that the cheapest power in Australia was at Kogan Creek coalmine. That wasn't anywhere near \$100 cost per tonne. It was \$9 per tonne because it's the cost of digging it up and putting it in a power station. You're quoting market prices there. I'm pricing the cost of getting it out of the ground and burning it. In Queensland, we still own our coal reserves, and many of the power stations are based off coal reserves that the people already own. There is no cost apart from the cost of extracting it. So you haven't mentioned that either.

Can we just move on, please? I want to finish that off. I didn't intend to ask that question, but the statement needed greater context. I want to ask about the \$224 million to provide storage for 100,000 homes, and this comes back to 'renewables are cheaper'. Given that there are 10 million homes in Australia, that would work out at \$22.4 billion to have backup community batteries for all 10 million homes. I don't really consider \$22.4 billion very cheap.

**Mr Duggan:** I don't think the government has a policy to provide community batteries to 10 million homes. But I'll ask Mr White—

**Senator RENNICK:** Okay, I'll rephrase that. You've got a policy to spend \$224 million to provide power for 100,000 homes. That isn't going to be much of a blip in the energy grid. So do you think the \$224 million that's spent on community batteries is actually worthwhile and an effective spend of taxpayers' money?

**Mr Duggan:** I'll ask Mr White to give you the details, but that particular project is aimed specifically at parts of the electricity system that do not have the opportunity to connect into the main parts of the grid. So it provides a storage capacity and a firming capacity that might not otherwise be available. In a sense, we need to ensure that we are comparing alternative options for a similar part of the energy system.

**Senator RENNICK:** I thought one of these batteries was going to go in near The Gap, in Brisbane. I'll stand to be corrected. Where exactly are these batteries going then?

**Mr Duggan:** Mr White will be able to provide more information on that.

**Senator RENNICK:** I thought some of these things were going into suburbia, where there's already an energy grid.

**Senator HUGHES:** Aren't there two planned—one in the Waverley Council area and one in the North Sydney Council area? Yes, because they're being objected to.

**Senator RENNICK:** Right. That's hardly in the outback.

**Mr White:** I think, possibly, some of the confusion coming through here is that the program is for 400 batteries in total, but the ones that are nominated relate to 58 specified batteries. There are 342 batteries that are going to be rolled out through the ARENA component of the program, and those do not have specified locations.

**Senator RENNICK:** So where will you put them? Because I'm hearing that they're going into North Sydney, Waverley and The Gap.

**Mr White:** When the government announced the program, it specified two components of the program. There are two streams of the program that are being run through the Business Grants Hub: one for 56 batteries with

specified locations and one for two batteries with specified locations and proponents. The total program is 400 batteries, and ARENA is responsible for the other 342. ARENA has opened its expressions-of-interest process for the first two streams of its element of the program. ARENA has been appropriated \$171 million in funding for the program. It has opened EOIs for a DNSP, a distribution-network-service-provider-led stream and a non-distribution network service provider stream. The total value of those streams is \$120 million. After the end of the expression-of-interest process, which closes on 30 June, full applications will be able to be made to ARENA.

**Senator RENNICK:** Okay. That doesn't sound very cheap. How long will these batteries last for, if you're assuming an average rate of consumption for the household? I've asked this question before; you took it on notice last time, but you didn't actually answer my question on notice.

**Mr White:** Last time, I recall saying that the Australian Energy Regulator had made a ring-fencing determination that would extend through to 2041 which enabled up to a 15-year lifespan for the operation of the battery.

**Senator RENNICK:** Sorry, I'll rephrase that question—my fault. Once fully charged, how long will the batteries run for, assuming an average rate of consumption?

**Mr White:** I'm sorry, I don't have the average rate of consumption figure in my head, but the—

**Senator RENNICK:** Well, if you're going to cost it, surely you'd use some assumptions? I would have thought you'd have some assumptions about how long this battery intends to work for on an average rate of consumption, otherwise how do we know they're going to be effective?

**Mr White:** As I was saying, I don't have those numbers in my head. The batteries are between 100 kilowatt hours and 500 kilowatt hours in terms of what we were supporting under the Business Grants Hub component of the program. ARENA has different specifications. There's also no obligation for someone to have a battery that's specifically of the size supported by the grants. They can introduce a co-funding component—in which case the battery will be of a different size.

**Senator RENNICK:** So you can't say for certain how long these batteries will run for, from fully charged to discharged, and how many houses?

**Mr White:** There's a simple calculation in the sense that batteries have a power rating and an energy storage rating. So if you have a 250 kilowatt battery with 500 kilowatt hours of storage, at full tilt it can run for two hours. But I can't tell you specifically what any one of the individual batteries in the program is going to run for.

**Senator RENNICK:** Right, okay. So you can't say if they're going to run for one hour or eight hours? If you've only got a battery that lasts for two hours and it's a cloudy day then you're obviously going to need to charge these batteries up. You're going to need back-up energy, aren't you? You've got to have contingency measures in place if you don't know how long the battery is going to last for, don't you?

**Mr White:** If I'm hearing the question correctly, I think there's an embedded assumption in there that the battery is the only thing that can support a network if it's cloudy. But that, typically, will not be the case.

**Senator RENNICK:** Well, no, because if you're close to the grid you don't need the battery. That's my point. I think Mr Duggan just suggested that these batteries weren't necessarily going to go anywhere near the grid and you can't have it both ways. If it's close to the grid, then you don't need the battery; if it's not close to the grid, you need to know how much back-up you've got. I just want some straight answers.

**Mr Duggan:** Can I just correct my evidence there, Senator, and take the opportunity to say community batteries are medium-sized grid-connected batteries.

**Senator RENNICK:** What's that, sorry?

**Mr Duggan:** Correcting my earlier evidence, community batteries are medium-sized grid-connected batteries, so they are connected to the grid.

**Senator RENNICK:** So they are connected to the grid?

**Mr Duggan:** Correct.

**Senator RENNICK:** Thank you. It's all very confusing. But I will ask how long did needs batteries have their warranty for, in terms of years not in terms of usage? Every battery has a warranty?

**Mr White:** The batteries will come with a warranty, and the warranty will depend on the battery manufacturer.

**Senator RENNICK:** And do you know what that is?

**Mr White:** I do not know what that is.

**Senator RENNICK:** Can you take that on notice?

**Mr White:** I can definitely take that on notice.

**Senator RENNICK:** And get it back to me within this session, if you don't mind, because I would've thought that'd be something you'd also take into account if you're going to cost the actual cost of these things.

**Mr White:** I'll take it on notice.

**CHAIR:** We need to rotate the call now, Senator Rennick.

**Senator RENNICK:** I've just got a few more questions.

**CHAIR:** No, we need to rotate the call because we're trying to be fair and reasonable, and spread it around. Absolutely we'll come back to you.

**Senator RENNICK:** Sure, okay.

**CHAIR:** Thank you. Senator Rice.

**Senator RICE:** I'm hoping to talk about national carbon accounts in the FullCAM model for determining changes in land use cover. I'm interested to know what ground truthing is done to check land use and land cover changes with remote sensed data in multiple-use forests.

**Ms Ford:** When putting together our estimates of land use, land-use can change and forestry for emissions under the National Greenhouse Accounts we use the FullCAM model, which you have referred to. It does take into account satellite imagery, which shows change in vegetation over time. That imagery is assessed by geospatial analysts within the branch, within the department, and I understand there's also interactions with state government departments on some of the geospatial data that's ingested into FullCAM.

**Senator RICE:** What are those interactions? Do they involve ground truthing?

**Ms Ford:** That's something I would have to check. Obviously, within the model calibrations within FullCAM there's a lot of fieldwork that goes into determining what the model calibrations are, and that provides verification of the estimates as well. So there's on-ground fieldwork as part of our continuous improvement program.

**Senator RICE:** Can you tell me more about what that on-the-ground fieldwork looks like?

**Ms Ford:** Yes. We—

**Senator RICE:** How frequently and what types of forest areas are you looking at?

**Ms Ford:** I'd probably have to take the details of that program on notice, but our CSIRO colleagues, who work with us to develop the FullCAM model, are in the field. I understand they have been in the field in the last couple of weeks. Those field sites are in areas across Australia, and they do cover a range of different ecosystems.

**Senator RICE:** If you could take on notice the details of that level of fieldwork and what types of areas they're in—particularly what forest types and the status of those forest types. I'm particularly interested in where you have logged forests that don't adequately regenerate—basically, where you have a mixed-use biodiverse forest, eucalypt forest, and then it fails to regenerate, essentially regrowing with silver wattle, bracken and weeds. What's the accuracy of the FullCAM model in picking up those changes from failed regeneration?

**Ms Ford:** Thank you for providing that level of detail in terms of what you're interested in. That will help us to determine the sort of work that we're doing.

**Senator RICE:** Further to the detail of what the ground truthing—or the calibration that's being done—looks like: is there a standard proportion of pixels across different forest types that is assessed and looked at each year?

**Ms Ford:** Again, that's something that I would have to take on notice.

**Senator RICE:** I'd also like to know whether it covers the full range of forest types, particularly different forest types that are subject to forestry. Is there any more information that the department is using that would aid in answering the question about what the effects of harvesting are, given the level of failed regeneration? Certainly there have been significant, very-good-quality reports that have been done, looking at failed regeneration, and they don't seem to be accurately reflected in the FullCAM model.

**Ms Ford:** The department does take into account harvesting data from state agencies, and we also take on board information from the Australian Bureau of Agricultural and Resource Economics and Sciences. That informs our work on land sector emissions. I would have to take on notice the exact detail of that question, though.

**Senator RICE:** Okay. I'm not sure whether these questions are for you or whether I should put them on notice: I'd like to know about the location of areas harvested and areas regenerated each year, including areas where the regeneration has failed by harvesting, and then the disaggregated carbon stock losses and gains.

**Ms Ford:** In the National Greenhouse Accounts, we look at a range of different land use categories, including forest land that remains forest, land converted to forest and, obviously, forest clearing. So we do have estimates of those areas and also the net emissions that are associated with that.

**Senator RICE:** Does that pick up failed regeneration, which isn't necessarily clearing but is a much lower carbon stock than what was originally there?

**Ms Ford:** We have definitions that help us to understand which pool different types of land need to be allocated to, and, in the satellite imagery, they provide us with information about things such as whether or not forest is regrowing over time. Forest regrowth and whether or not forests are recovering are something that we pick up over time in the time series data, and that affects the allocation of particular areas of land to the categories.

**Senator RICE:** So you would have a category that's effectively failed regeneration, where you're not having regrowth as a eucalypt forest? It might be the case that you have blackberries that appear green, and it looks like you're getting regeneration according to the satellite data, but, in fact, when you go down there on the ground, you find that that's not what is occurring.

**Ms Ford:** I don't think that we have a category called 'failed regeneration', but we certainly have different types of categories of land and land use. So I'd have to take that on notice. I think your question is really around what level of ground truthing there is to assess that these forests are regenerating over time, including to provide assurance that they actually are, as you said, for example, eucalypt trees as opposed to some other type of vegetation that's picked up as greenery.

**Senator RICE:** It's the accuracy. I'm a bit concerned that you don't seem to have that category, because that is a very significant change in the forest stocks and the sequestration occurring—if you have this failed regeneration where you've got something regrowing, but it's not going to have the same carbon stocks as the forest that was there.

**Ms Rowley:** If I could just note that, within the different types of vegetation that are included in the model and represented through the carbon estimation, there's not a single kind of forest, so, when, for example, land is harvested to the extent that it is regrown as a different kind of vegetation, there would be scope.

**Senator RICE:** There would be scope—what do you mean?

**Ms Rowley:** The model doesn't have a single kind of vegetation represented.

**Senator RICE:** But does the model accurately model that circumstance where you've got the removal of a eucalypt forest and then regeneration of something quite different that hasn't got the same level of carbon in it?

**Ms Rowley:** That would be a function of what the overall allocation of land within the model is. The point that I was making was simply that not every type of forest is assumed to be replaced by the same type of forest or even the same type of vegetation.

**Ms Evans:** We're confident in the quality of our land sector emissions accounting. I think what the team is struggling with is whether or not it can split out in the way that you are describing or whether it is covered in a different way. I think we've understood the line of inquiry that you're after, and we'll respond to the question on notice.

**Senator RICE:** I'll put on notice the detailed data that I would like, which includes the loss of forest area due to regeneration failure and how that is modelled and how effectively that's modelled under FullCAM. Thank you. Thanks, Chair.

**CHAIR:** Thank you, Senator Rice. Senator Cadell.

**Senator CADELL:** I'd like to go back to price for a second and then to wholesale stuff. Mr Duggan, you were talking before and you said 5.5 million households are estimated to benefit from the government's \$500. How many households currently use electricity on the grid?

**Mr Duggan:** If there are, broadly, 10 million households, I'd imagine it must be almost 10 million.

**Senator CADELL:** Being precise around terms: the price of electricity is rising for everyone; the cost of electricity isn't rising for 5.5 million households. Is that a fair thing to say?

**Senator HUGHES:** The cost is still rising for them—just not as much.

**Mr Duggan:** It depends a little bit on what you use as the baseline. It is absolutely the case that, in the absence of the consumer rebates, you would see electricity—

**Senator CADELL:** But they are rebates. They go to the consumer. The price is still the same for the consumer. Is that right, or is it being given to the energy companies? Where is the impact of that money going?

**Mr Duggan:** It is to the consumer.

**Senator CADELL:** So the bill is still going up by 35 per cent. I think that was the number you said.

**Mr Duggan:** If we use the draft default market offer as a guide, we were looking at price rises in the order of 15 to 20 per cent depending on the region. That's before the impact of the—

**Senator CADELL:** It's not a price rise. It's not a bill rise. That's a cost to households.

**Mr Duggan:** That's right.

**Senator CADELL:** In your thing, the bill is expected to go up 35 per cent to everyone—to those 10 million households.

**Mr Duggan:** We're confusing a couple of different things here. The 35 per cent refers to Treasury's estimate of what the nationwide increase in retail electricity prices would have been in the absence of any government intervention in 2023-24. That's the next financial year. Following all of the interventions—the gas price caps, the coal price caps and the consumer rebates—Treasury estimate now that, effectively, there will be a 10 per cent nationwide increase next financial year in retail electricity prices for households.

**Senator CADELL:** After that?

**Mr Duggan:** Yes.

**Senator CADELL:** What is that in dollar terms for the average household?

**Mr Duggan:** Again, the rebates are targeted, so it depends on whether or not you're eligible for a rebate.

**Senator CADELL:** I imagine most people in this room aren't, but, on average, what is the amount?

**Mr Duggan:** For the average household that receives the rebate, it's a \$500 consumer household rebate.

**Senator CADELL:** What percentage of an average household's energy bill do we expect that to be if modelled?

**Mr Duggan:** If you'll give me a moment, I can get you what the average household pays in terms of their electricity currently. The national average on electricity for a household with a gas connection is \$1,455. Of course that will grow with the increase in electricity prices that I referred to, but then you would subtract from that the rebate.

**Senator CADELL:** Using that estimate, roughly \$1,400 goes up by 10 per cent to \$1,540, less the \$500. That's the way that's been worked?

**Mr Duggan:** Yes, broadly.

**Senator CADELL:** Thank you very much for that. I'd like to go now to my erstwhile friend the GenCost numbers. GenCost uses LCOE. IEA also has that number, but on all energy sources they put levelised cost of storage as well when they quote cost to market. Why don't we apply that to the GenCost models here? GenCost just has LCOE, not levelised cost of storage as well.

**Mr Duggan:** My understanding of the GenCost report is that it's not just the marginal generation figure and that they are taking into account the impact of some of the related infrastructure and broader elements of the costs.

**Senator CADELL:** And transition, I get that, but not the levelised cost of storage that the IEA model has.

**Mr Duggan:** I'm not in a position to be able to draw the technical distinctions between the way those two models come together.

**Senator CADELL:** That's frustrating going forward. There's very little question across IEA and GenCost at CSIRO. I think some of the production numbers are very similar until we put levelised costs of storage in things where onshore wind and commercial photovoltaic solar range between \$40 and \$75 if you use the IEA model. If you add that to the \$50 to \$80 for onshore wind generation, \$40 to \$75 for levelised costs gets you \$90 to \$155 using the IEA systems. Do we use the IEA at all for these sorts of things?

**Mr Duggan:** Yes, we look at all the international figures. We are very active in monitoring the latest assessments of all the different technologies that are available in terms of the energy transition. We also look at the OECD's Nuclear Energy Agency. They do very similar estimates. They come up with numbers but those numbers are pitched at the global level. For example, this is an area which really depends a bit on what your natural resource base is and the existence or otherwise of certain energy production sources.

**Senator CADELL:** I.e. coal's \$140, we're \$80 or something like that because of our abundance?

**Mr Duggan:** Correct.

**Senator CADELL:** Would your department be willing to ask CSIRO for a levelised cost of storage calculation to be published along with the levelised cost of energy?

**Mr Duggan:** This department has a very significant interest in ensuring that we get the best possible estimates on a comparable basis between the different technologies. We know that CSIRO and AEMO have received a lot of technical input to their estimates. I know that they're thinking very carefully about how best to adopt and reflect that. I have enormous faith in CSIRO and AEMO and their technical competence, so I would defer to their expertise on the best way to reflect all that feedback we've received.

**Senator CADELL:** On a slightly different topic, there are a lot of questions about no new coal. There were some questions earlier about no new coal projects that even referred to the Pacific Islands. The coal project that was approved, was that metallurgical coal, Ms Evans?

**Ms Evans:** That's my understanding of what that mine is.

**Senator CADELL:** I think it's Bowen metallurgical coal, but I don't think it's any relation to the minister. Metallurgical coal doesn't have a lot of thermal generation and stuff like that. Do you know of any renewable projects that are built without metal?

**Ms Evans:** I wouldn't want to be categorical across all renewable projects—

**Senator CADELL:** It's not that they don't exist—are you aware of any?

**Ms Evans:** There is a certainly a lot of steel involved in building wind turbines, for example, and in other installations of renewable energy there is certainly the use of steel and other metal.

**Senator CADELL:** Are you aware of any organic iron being found in the world that doesn't need to be mined, or fruits that grow iron or copper or lithium or anything like that?

**Ms Evans:** Sorry, I don't—

**Senator CADELL:** What I'm saying is—

**Senator McAllister:** I wonder if the best way for Ms Evans to engage with the tenor of your question, if not the specifics, is to give an outline of some of the industries that we understand will be essential to enable the clean-energy transition. It was a feature of our thinking in designing the safeguard mechanism, it has been a feature of our thinking in establishing the Powering the Regions Fund, and for colleagues working on the National Reconstruction Fund, which is not in this portfolio, it is a feature of thinking for the government there.

**Senator CADELL:** I might rephrase. Do you think building all the infrastructure required for rewiring the grid and all the renewables is possible without mining in some sorts of SAFE's critical minerals?

**Ms Evans:** No, there will definitely be a variety of mineral products that are absolutely essential for the renewable energy superpower vision to be realised in Australia. In particular, the critical minerals and other components of batteries and other storage elements, the photovoltaic panels themselves, and the infrastructure that needs to be built for both hydrogen and renewable energy generally all heavily relies on being able to access minerals, which Australia has got a great capacity to supply.

**Senator CADELL:** In mining in Australia, are things like metallurgical coal for iron one of those things?

**Ms Evans:** Metallurgical coal is certainly still going to be an input into steel. I think that, longer term, the vision is that there would become ways of manufacturing green steel, but, in the short term, that's still an element of the production of steel in Australia.

**Senator PAYMAN:** I'd like to ask about the caps imposed on gas prices that were announced last year. I'm curious to know: to what extent has this measure reduced projected increases in electricity prices, and by how much have the forward prices on wholesale electricity changed?

**Mr Duggan:** Due to a combination of both the caps put on coal input costs for coal-fired power generators—there was a cap set in Queensland and New South Wales of \$125 per tonne—and the implementation of a temporary price cap on gas contract prices of \$12 per gigajoule, we saw, as I referred to in earlier evidence, a significant decrease in the wholesale futures price of electricity for next financial year. To give you an example in New South Wales, what we saw prior to the October budget was a wholesale futures price for electricity for next financial year of around \$230 a megawatt hour at the start of October. At the start of December, after the announcement in the budget that the government was committed to doing something about high electricity prices, we saw it fall to \$181 a megawatt hour. Then we saw it fall further after the announcement of the Energy Price Relief Plan to be around \$145 a megawatt hour currently. Basically, if you compare where it is now to where it was, it's a decline of about 63 per cent since before the October budget.



**Senator PAYMAN:** What impact did the government's intervention have on the forecast for the default market offer?

**Mr Duggan:** The Australian Energy Regulator indicated that, in the absence of intervention, we would have seen, in default market offer prices in the regions that they set the standing offer price, increases in the order of 40 to 50 per cent. Instead, the draft default market offer that they put out a month or two ago was in the order of 15 to 20 per cent. So there has been a very significant downward impact on prices—there has still been an increase but a very significant reduction in the extent of the increase.

**Senator PAYMAN:** Would you say that price caps on gas have, according to your evidence, reduced the cost of energy and had a deflationary effect?

**Mr Duggan:** I would say that they moderated the inflationary impact that we were seeing coming through from the uplift in international energy prices. I think the price caps on gas through not only the impact that I just described on electricity prices but also the direct impact on gas prices for both households and commercial industrial use took out a very significant component of price rise, which meant that as, Mr Fredericks referred to, the whole plan together was estimated by Treasury to take 0.75 percentage points off inflation.

**Senator PAYMAN:** Would a repeal of those price caps have an inflationary or deflationary effect?

**Mr Duggan:** We've just finalised a second round of consultations on a mandatory code of conduct for gas. This was announced as part of the energy price relief plan, and, essentially, the temporary price caps on gas will expire in December this year. The mandatory code of conduct on gas has a pricing framework in it that will then continue beyond the end of this year. Within that, the model that has been consulted on had within it a price anchor of \$12 per gigajoule, which is consistent with the current price cap. So it's a continuation of contracted gas pricing, which will broadly be at the same level as we head beyond the term of the temporary price cap until a review in around the middle of 2025, when the government will consider the need for a price framework to continue in the gas market.

**CHAIR:** Thank you. We will now go to Senator Waters.

**Senator WATERS:** Can I go to the Rewiring the Nation project and focus on unblocking transmission bottlenecks and getting transmission out to our richest renewable areas? What our parties have been hearing from stakeholders is that we are not on track to unlock the infrastructure that would get us to 82 per cent renewables. Does the department share that view?

**Mr Duggan:** I will refer that one to Ms Gowans.

**Ms Gowans:** I think we hear a very wide range of stakeholder feedback in relation to transmission projects. It's certainly the case that there's a challenging social licence environment for social licence projects. But there are also a wide range of policies that are designed to help those projects to stay on track and, in some cases, to come forward. So do we agree that they're not on track? They're certainly facing headwinds in terms of social licence, supply chains and workforce challenges. But they're also receiving quite a considerable amount of support to try to mitigate those risks through the Rewiring the Nation program and other initiatives undertaken by states and also by industry.

**Senator WATERS:** Has it pushed out the time frame? What is the time frame for getting to the 82 per cent target?

**Mr Duggan:** The time frame there is of course 2030. Just to add to Ms Gowans' evidence regarding the \$20 billion Rewiring the Nation program, the government has reached an agreement with New South Wales, Victoria and Tasmania that together provides the projects to deliver about \$12.3 billion of that \$20 billion. We're in negotiations currently with other jurisdictions, including Queensland and Western Australia. So our sense is that, given that the government came to office 12 months ago, we're actually making very good progress in getting all those agreements that will support the projects in place, notwithstanding, as Ms Gowans referred to, the fact that within individual projects of course there are complexities about rolling out each individual componentry.

**Senator WATERS:** Last week, the CEO of the CEFC—I understand they're coming on later—Mr Learmonth, shared similar concerns at a CEDA conference that Australia's currently behind the pace of meeting the 2030 targets. What are you doing to quicken that pace?

**Mr Duggan:** In my earlier evidence, I mentioned that there absolutely needs to be an acceleration of investment in renewable energy. I referred to the fact that we have seen a very significant increase in investment, particularly around solar technologies. We are starting to see an increase in wind technologies but not to the extent that we need to see. This is the way I described it: we wouldn't expect it to be a linear pathway between here and 2030; we would expect to see an accelerated pathway. What we're very focused on, and what the

government is very focused on, is getting in place the policies and regulatory frameworks that will facilitate that acceleration. Certainly, based on the information we have from the Clean Energy Regulator, who monitors the project pipeline, they saw a very significant increase in the project pipeline around renewable projects last year—in particular, in the second six months of last year—which gives us a sense that we are starting to see that building momentum. But the commentary which says we need to accelerate from where we are is absolutely accurate. We would agree with that.

**Senator WATERS:** You just mentioned regulatory frameworks that need to be—I didn't catch your exact phrasing—changed to facilitate delivery of transmission elements, essentially. Can you just tell me what regulatory changes you're referring to?

**Mr Duggan:** Yes. To give you one example, Ms Gowans referred to social licence being very important with the rollout of renewable energy. One of the areas that the government has prioritised has been in responding to a review of the regulatory framework, around which the Australian Energy Regulator takes into consideration its requirements from proponents of projects. In the early work that was done around that review, there was a very big focus on the social licence elements. That involves early and comprehensive engagement with communities to ensure that social licence is built as the project is being rolled out and that, in fact, there is real community consultation—that is, when that feedback's received, it's reflected in the way the project's designed. That would be one example of the sort of regulatory frameworks that I'm talking about.

**Senator WATERS:** Are you proposing that that be changed and clarified to strengthen those community consultation requirements, or is it more the vibe of the thing?

**Mr Duggan:** No, we are actually making some absolutely significant changes around the rules. Did you want to go into that, Kirsty?

**Ms Gowans:** Yes. As part of the Rewiring the Nation program, we have a focus on regulatory reform, including to the RIT-T, which is the investment test for transmission. Some of the areas which have needed reform in the past have been to direct transmission network service providers as to when they can and when they should be engaging with communities, so for example on the route design. The evidence is that the earlier the engagement and also the quality of the engagement significantly affect the social licence outcomes. The government has lodged a rule change request to the Energy Market Commission to change the rules that relate to that early engagement process for social licence. There's a further rule change request that has also been lodged to pass on the concessional finance benefits of the Rewiring the Nation program, which is the government's \$20 billion investment in transmission projects. There are other rule changes that are also planned, and in part they will set up guidelines for transmission network service providers about when to engage and what to do, and they're really focusing on essentially the fundamental elements of social licence, which are all to do with procedural fairness and shared values. They're not fixed at a point in time, but we expect those rule changes will flow through and have a beneficial effect for local landowners.

**Senator WATERS:** What time frame for that community consultation rule change is there?

**Ms Gowans:** I don't think there is a time frame specifically. There are a number of different time frames in the RIT-T process for consultation, but the purpose of the rule changes is to ensure that there's early engagement in the early works process, so in the design of the project itself.

**Senator WATERS:** I appreciate that, but I'm asking: when does the rule change come into effect?

**Ms Gowans:** The rule change has been lodged, and I think the consultation period on the rule change—Mr Johnson, can you help me with the timing?

**Mr Johnson:** We expect the AEMC to commence that process in the middle of the year under a fast-tracked process, so it will be completed around November.

**Senator WATERS:** So they will think about the rule change, and if they tick it off it will come into effect mid-November. Is that right?

**Mr Johnson:** I believe that's correct, yes.

**Senator WATERS:** Ms Gowans, you mentioned earlier some of the challenge and headwinds, including supply chains and labour challenges. Is the department looking at any other solutions to address those challenges—for example, any global interest in other non-domestic companies building transmission—or are you solely relying on Australia's network companies?

**Ms Gowans:** I think there's a range of different strategies to address supply chains. Some of them deal with international connections and some of them are to do with procurement strategies. The government is using a wide range of strategies and actions to deal with that. In the Rewiring the Nation program, we are looking at

accelerated procurement, long-lead procurement and locking in orders early, and we're also looking to see whether you can aggregate up orders to get better pricing. In addition to that, there is international engagement with other countries and suppliers and a supply chain strategy that is in the works. Certainly, supply chains are front and centre, and every available strategy will be considered and used wherever appropriate.

**Senator WATERS:** If you were considering an international bidder, would they bid competitively for the right to build, or would they have different parameters or different processes for getting the tender?

**Mr Johnson:** To be clear, we do not engage the bidder. The transmission companies would be the ones arranging the construction and securing the contracts to bid.

**Senator WATERS:** Would you tell them that there would need to be competitive bidding, or would you leave that up to them?

**Mr Johnson:** It would need to be competitive bidding because the AER approves the cost recovery. If they can't convince the AER that the costs that they have secured are efficient, then the AER will not allow those higher costs to be recovered.

**Senator WATERS:** Can I ask now about storage capacity to meet the renewables target. What storage capacity does the department expect to be in place by 2030?

**Mr Duggan:** If we think about it in terms of megawatts, utility scale storage is currently about 758 megawatts. By 2030, we're going up to something like 12,189 under AEMO's step change scenario.

**Senator WATERS:** By 2030?

**Mr Duggan:** That's correct.

**Senator WATERS:** I've got statistics here that the Clean Energy Investor Group says that 10 gigawatts is what we need to be on track for 1½ degrees, so it seems like that's achievable by 2030?

**Mr Duggan:** It would be consistent with what I just referred to, with respect to the AEMO step change. That's correct.

**Senator WATERS:** Are you expecting Snowy 2.0 to be complete by 2030?

**Mr Duggan:** On the basis of the public statement that was made by Snowy Hydro earlier in May, their current expectation for their commercial use of Snowy Hydro, so when it is fully onboard, is between December 2028 and December 2029.

**Senator WATERS:** What's their total storage capacity projected to be?

**Mr Duggan:** For Snowy Hydro?

**Senator WATERS:** Yes, please, once it's up and running.

**Mr Duggan:** I will ask our Snowy expert to come to the table.

**Mr Whelan:** Snowy 2.0 will increase the scheme's generation capacity by up to 2,000 megawatts of dispatchable generation and provide 350,000 megawatt hours of deep storage.

**Senator WATERS:** Community batteries: what's the total capacity from the 56 community batteries that the department's implementing?

**Mr White:** At this stage, not all of the 56 batteries have been approved and committed.

**Senator WATERS:** Yes, that was going to be my next question.

**Mr White:** So the total capacity will depend on the final batteries. At this stage, it's approximately 20 megawatt hours.

**Senator WATERS:** And from how many batteries? I understand that many of the 56 probably won't get installed? How many are you expecting?

**Mr White:** The 56 batteries relate to stream 1 of the Business Grants Hub program, and there are also two batteries in stream 2 of the business grants subprogram. Collectively, those come up to 20.7 megawatt hours.

**Senator WATERS:** That's if they all go ahead. What's the progress? Have any been installed as yet?

**Mr White:** No. The approval decisions have just been made. The figures that I just gave you were the figures for the storage capacity that's been approved.

**Senator WATERS:** I thought you said 56 are in stream 1, and two are in stream 2. I don't understand which ones have been approved and which ones haven't?

**Mr White:** Fifty-two batteries out of the total 58 have been approved.

**Senator WATERS:** Have they been installed?

**Mr White:** No, they've only just been approved. At the moment, the process is that the Business Grants Hub in the Department of Industry, Science and Resources is negotiating grant agreements with the applicants who have been successful.

**Senator WATERS:** How many are you expecting to actually get installed?

**Mr White:** All of them.

**Senator WATERS:** Do you need council permission? Do you need network permission? Who else's permission do you need for the install?

**Mr White:** The applicants will need a range of approvals.

**Senator WATERS:** Thanks for that very helpful answer! I think I will draw a line under it there. Thanks for your help.

**CHAIR:** Senator Van.

**Senator VAN:** Thank you very much. Minister, I don't want to put words in your mouth, but would you say that the right way to decarbonise our economy would be the fastest, cheapest and most efficient way possible? Would that be the aim of your government?

**Senator McAllister:** I think we've made our policy settings clear. It is our intention to move towards net zero by 2050. We've established a 43 per cent target by 2030. So, in relation to fastest, we consider that an ambitious and achievable timetable. When we are establishing the policy settings to assist the economy to move towards those targets, of course we think about the optimal economic pathway and policy design that will deliver an optimal economic transition.

**Senator VAN:** So an optimal economic pathway is good? Of course, there's what's known as the 'time cost of emissions'. Emissions now account for a lot more in later decades. Anyone at the table can take that one, but, Minister, I'll ask it of you.

**Senator McAllister:** Could you articulate the question?

**Senator VAN:** Yes. There is a term called the 'time cost of emissions'. What it effectively means is the cost of emissions sooner count for more later on as the emissions build up in the atmosphere. That is the general basis of the theory.

**Senator McAllister:** I think the approach that the government has taken in terms of setting targets is aligned with the way the IPCC thinks about these challenges. For example, our 2030 target includes an overall emissions budget and a point-in-time target, and that's reflected in the way that those targets have been articulated—for example, in the safeguard mechanism budget. I don't know whether officials have anything else to add about this. You are, in a broad sense, correct; the timing of emissions does matter.

**Senator VAN:** We all agree faster is better. You can disagree with me if you like.

**Senator McAllister:** I'll take that as a comment.

**Senator VAN:** In order to bring down emissions, we need to look at renewable energy and clean energy. Does the department have a definition splitting clean energy and renewable energy? Which one's which and which one's what? You're responsible for two agencies, one with one name and one with another. How do you define the two?

**Ms Evans:** If take it from the perspective that you have proposed, or if I look at the definition for the Australian Renewable Energy Agency up until recent adjustments, which have clarified that they can also work on energy efficiency and electrification, renewable energy was literally solar, wind, wave energy—anything that comes from a genuinely renewable source. For the Clean Energy Finance Corporation, it was a broader concept, very explicitly including energy efficiency, electrification and other things that would support low emissions investments. I think you're getting at the difference between renewable energy and clean energy. When we would say clean energy, that would include other very low emissions sources of energy. In the past we've talked about blue hydrogen, for example, which is an energy source that has very low emissions, but it doesn't come from a renewable source. There are other forms of energy that also have low emissions.

**Senator VAN:** Segueing from Senator Waters's questions before on transmission—transmission adds no generation, adds no storage and is highly contested under its social licence. I think we established that, and we'll hear from the Energy Infrastructure Commissioner tomorrow, who we've heard from before, confirming the same thing. Given the enormous cost of transmission, how does that help Australia lower emissions faster and more efficiently?

**Mr Duggan:** The intention of the expansion of transmission infrastructure is largely to accommodate more renewable energy into the grid. In doing so, it has a cost dimension to it—so more low-cost variable renewable energy—but also a firming element to it. By enabling us to access broader geographies, it means that we aren't subject to the risks that arise through concentration of variable renewable energy sources. So there is an advantage there. Also, if I think about, for example, the recent agreement that was reached with Tasmania and Victoria around Marinus Link, it allows us to access abundant energy in one jurisdiction and put it into jurisdictions that may not have the same natural advantages as Tasmania. So it opens up additional low-cost energy sources for us as well.

**Senator VAN:** But, let's face it, the first energy grid, the Victorian energy grid, was built because the fuel source for the generation was down in the Latrobe Valley—and it's similar in the Hunter and in WA, Collie et cetera—and Sir John Monash built the transmission lines because you had to generate where the fuel is. These days, with renewable energy, particularly with solar, we don't have that same issue, do we? In fact, it's going to be more efficient to put the generation where the load is rather than trying to find resource out in the middle of nowhere and then transmit it into a city centre where there's a greater load.

**Mr Duggan:** There are two aspects of what you just said. One is, yes, it's more efficient if you can locate generation closer to demand centres. I take your point that, in the case of a large coal-fired power station, there is the need to transmit it to those sources. I don't think it's quite true, though, to say that transmission doesn't help you to get more renewable energy into the system, because, if you're thinking about onshore wind, offshore wind or large solar capacity, it's very difficult to locate those big sources of variable renewable energy within a city concept, for example.

**Senator VAN:** Really? We currently have the highest concentration of rooftop solar in the world. Sorry; I should phrase that as a question. Ms Gowans is nodding, so I'll take that as a yes.

**Mr Duggan:** We do.

**Senator VAN:** Yet we're only at, I think, roughly 30 per cent penetration of solar in Australia on residential rooftops.

**Ms Gowans:** This does highlight the value of transmission, both in the high-voltage transmission lines and in the distribution network, because we can all put rooftop solar on our roofs, but we still need to be able to export it in and out of the grid, either through the distribution network or the transmission network. Renewable energy also has areas where there are high resources and high-value resources, in wind and other places. It is similar with solar. Some sites are better than others. At the moment, we have a situation where, particularly in Victoria, a very significant amount of renewable energy generation is constrained, and we are effectively in a situation of gridlock. So opening up the possibility of export unlocks the value of the investments that have been made, including in Victoria.

**Senator VAN:** But we covered that off. Those investments were made by foreign companies in faraway places in Victoria, without any transmission into a load centre. I would argue that they were mistakes of past governments, state and federal. But, if we are actually trying to solve for rapid decarbonisation, transmission is not going to get us there. Let's take the VNI West, the project which is designed to connect the 'rhombus of regret' into Melbourne and other load centres. We established earlier that there is use for that excess VRE at the moment. It's 50 per cent curtailed most of the time. That could be used by industry, whether it be hydrogen or other uses, right now. VNI West is at best going to be built by 2031. Am I correct?

**Ms Gowans:** The current timetable in the Integrated System Plan is 2030, and there is a hope the Victorian government initiatives and Commonwealth government agreements are aimed at accelerating that time frame, hopefully to 2028.

**Senator VAN:** Transgrid itself says 2031. I'm happy to table that if you want, but it's easily looked up in their FAQ. They say 2031. I'm sure tomorrow the Energy Infrastructure Commissioner, Mr Dyer, will confirm or support that number. I will come back later with some more questions about that project—just as a model or an example of where transmission is not an answer to decarbonisation, to powering industry or to supporting the electricity grid.

**Senator HUGHES:** To get a definitive position, especially since we had an inquiry last week surrounding the nuclear moratorium, is it the view of this government—to be continued through and directed to the department—that nuclear energy is definitely excluded from the mix of all practical ways to decarbonise our economy by 2050?

**Senator McAllister:** The government has no plans for a civil nuclear power industry in the context of decarbonisation

**Senator HUGHES:** That's excluded. Alright. I know we talked about fuel efficiency standards. Is that for infrastructure and transport, or can we try a couple of things here? Is that alright?

**Mr Fredericks:** Yes.

**Senator HUGHES:** Are there any vehicles currently for sale in Australia that are likely to be impacted and any vehicles that are currently sold that won't make the standards, so won't be available anymore?

**Mr Ryan:** Perhaps I can answer that. Just to note, this is being led by the department of infrastructure and transport, but I'm happy to be helpful.

**Senator HUGHES:** But it sort of links in with the National Electric Vehicle Strategy.

**Mr Ryan:** It does.

**Senator HUGHES:** It's a bit difficult, because a lot of these policies seem to be piecemeal with each department, and when they're on at the same time in estimates it's difficult to be in multiple places at the same time!

**Mr Ryan:** That's okay. I'm happy to help out with that one. The fuel efficiency standard is out for consultation at the moment, but in that paper it explains that it doesn't prohibit any vehicle at all from being sold in Australia. The actual approach is on a fleet-by-fleet—a manufacturer—basis. They have to meet a target. So it's up to them to supply models, and it can be any models, to meet that standard when it's put in place.

**Senator HUGHES:** What sort of vehicles are we likely to see adding to the Australian market once this is—

**Mr Ryan:** More electric vehicles is probably the quickest answer, but just more fuel-efficient vehicles—even ICE, internal combustion engines, vehicles that are more fuel-efficient than the ones that are operating now.

**Senator HUGHES:** Okay. What's inhibiting, or what's a barrier, to those vehicles being sold now?

**Mr Ryan:** There's actually no requirement for the manufacturers to actually supply them in Australia at the moment. So Australia, along with Russia, is one of the only countries not to have a fuel efficiency standard in place, among developed economies. The reason we don't get as many vehicles and a lot more options for electric vehicles is that there's no requirement for fleet manufacturers to bring them into the country.

**Senator HUGHES:** So we do have those vehicles here—there are vehicles already that would meet those requirements?

**Mr Ryan:** There are. There would be some.

**Senator HUGHES:** And people can buy them now, if that's what they want—there's nothing restricting that at all? You're saying this will help encourage more of those vehicles and less of the others to come into the country?

**Mr Ryan:** It will encourage vehicle manufacturers, over their entire fleet, to have a number of offerings, including lower-emissions vehicles.

**Senator HUGHES:** The government's claimed that Australia is basically a dumping ground for high-emitting vehicles. Is that what's happening? Is Australia a dumping ground for high-emitting vehicles?

**Mr Ryan:** A lot of the vehicles in Australia have high emissions, yes. There's a voluntary standard in place that's managed at the moment, and our targets are a lot higher than other countries that have a fuel efficiency standard regulated in place. We're well above those countries.

**Senator HUGHES:** I might leave that part there. There was a line item in Budget Paper No. 2—it's actually the first one—that is \$7½ million for an ACT-specific scheme. It's around housing loans for improvement. I just don't have the budget papers to give you the page, but it's the very first one under 'climate change and energy' from Budget Paper No. 2.

**Ms McLaughlin:** That particular line item is a part of the broader Energy Price Relief Plan.

**Senator HUGHES:** That's the up-to-\$500 payment?

**Ms McLaughlin:** Yes.

**Senator HUGHES:** That \$7½ million is a specific thing—

**Ms McLaughlin:** For the ACT.

**Senator HUGHES:** There isn't a separate line item for other states. Why does the ACT have its own?

**Ms McLaughlin:** I think you would have to ask Treasury about that.

**Senator HUGHES:** This is where it gets very difficult, because it's under your portfolio in the budget papers, and this redirecting to every other department makes it very, very difficult. Perhaps, if they're the only ones that can answer questions about these things, it should be in their department on the budget papers, because it's very

difficult for us to be able to ask questions to the right department if you're publishing it in one part of the budget papers but they're not applicable to you.

**Mr Fredericks:** I can understand why you're raising that point. The difficulty is that, at the end of the day, the structure of the budget papers, including the identification measures, is done by Treasury. That is one instance where Treasury made the—

**Senator HUGHES:** But it is an energy program.

**Mr Fredericks:** It is.

**Senator HUGHES:** It's an energy and climate change program, so it would be really helpful if someone from the department of energy and climate change could answer some questions on it. It's completely outrageous.

**Mr Fredericks:** We'll take it on notice.

**Senator HUGHES:** Maybe you can answer this: isn't the energy price relief the same type of activity that's covered by the CEFC? I know we're seeing them later. Isn't their \$1 billion program, which was also announced in the budget, the same sort of thing? They're low-cost loans to make improvements to houses.

**Ms McLaughlin:** That's right; they are the same sort of thing.

**Senator HUGHES:** Why aren't they included together?

**Ms McLaughlin:** The billion-dollar CEFC measure is being delivered on a national basis through—

**Senator HUGHES:** Isn't ACT part of the nation?

**Ms McLaughlin:** Indeed. That \$7½ million that's in that line item is a specific—

**Senator HUGHES:** Additional payment.

**Ms McLaughlin:** additional payment.

**Senator HUGHES:** Will this impact ACT homes and their ability to access the \$1 billion program?

**Ms McLaughlin:** No.

**Senator HUGHES:** So the ACT is getting an extra \$7½ million, in effect?

**Ms McLaughlin:** Yes.

**Senator McAllister:** May I add some context for this. I understand that, in the context of the negotiations for the rebates for energy price relief, as part of that, an agreement was struck with the ACT government to support their sustainable household loans program. Mr Duggan may have additional information about this—I'm not certain. But again, these were matters which were—

**Senator HUGHES:** Their programs—

**CHAIR:** Hang on. You can just finish, Minister.

**Senator McAllister:** I hear your frustration about finding the right place to ask questions. The reason officials were directing you to Treasury was that it was in the context of a negotiation between state treasurers and the Commonwealth Treasury.

**Senator HUGHES:** I'm just trying to understand why the ACT is getting a \$7½ million additional payment and not any other jurisdiction. Looking at this and at some of the timings, would this part of negotiations, but also this part of broader discussion across potentially the Senate—is this \$7½ million effectively 'Pocock-barrelling'? We're effectively offering Senator Pocock, perhaps in exchange for his vote on the safeguard mechanism, \$7½ million in additional funding outside of a \$1 billion scheme to the ACT that no other state gets access to. It's a one-year program. I mean, it just seems to be 'Pocock-barrelling'.

**Senator McAllister:** Senator Hughes, may I respond to the political part of your question?

**Senator HUGHES:** Sure.

**Senator McAllister:** And then I will ask Mr Duggan to provide additional information. I reject that characterisation. I have explained to you that it is a measure that arises in the context of the negotiations that took place about the best way to deliver energy price relief to each of the different jurisdictions, noting for each of the jurisdictions, the reason—as was explained publicly by the Treasurer at the time—to do it that way, in a series of bilaterals, is because each state and territory has different existing arrangements to provide support to electricity users or energy users, and distinctive agreements were made with each of the states and territories. But Mr Duggan may have some additional information.

**Senator HUGHES:** How much is the ACT government contributing?

**Mr Duggan:** Senator, I can help you with your question. Essentially, as I mentioned earlier, the intention here was that each eligible household will get a \$500 per household rebate on their electricity bill. In the case of the ACT, the projected electricity price increase for them next financial year was very low, the reason for that being the ACT sitting within the New South Wales grid on what is essentially a completely renewable grid. In that context, it was a very small increase, so the \$500 rebate would have actually seen electricity bills fall in the ACT. Rather than providing that support, to be equitable across all jurisdictions—the states and territories—effectively the Treasurer has arrived at an alternative way of giving the ACT equivalent assistance, and that was through this \$7½ million program. Essentially, if you look across that program and the bill rebates then you get equity across all jurisdictions, and that's the agreement the Treasurer has reached.

**Senator HUGHES:** The other states are going to receive, in effect, a bill relief handout, but this \$7½ million is being earmarked for low-cost loans. Does that mean everyone in the ACT can access these low-cost loans? How much is the ACT government putting in? Can every household in the ACT apply for part the \$7½ million for a low-cost loan for home improvements around renewables or energy efficiency?

**Ms McLaughlin:** I don't have an answer for that on me, but I'm happy to take it on notice.

**Senator HUGHES:** So we don't know if the—

**Ms McLaughlin:** The Sustainable Household Scheme that the ACT government runs is a pre-existing scheme, and there are eligibility requirements for that which we will come back to you on. But this is essentially a top-up to an existing ACT government program.

**Senator HUGHES:** So we don't know if the same eligibility criteria are going to apply for the 5½ million households who can access the rebate across the country versus what the criteria for this money in the ACT? There could be completely different criteria.

**Senator McAllister:** Senator Hughes, I think it's been explained to you that the context for this—

**Senator HUGHES:** Not really, but can we just keep going because I know we're running out of time. I did ask a couple of times what the ACT government—

**Senator McAllister:** Senator Hughes, I'm sorry, but the challenge is that in your questions you made certain assertions. I think the official has explained to you that she will come back with details if they're available about the existing arrangements for this program of the ACT and the eligibility criteria in particular. But, as Mr Duggan explained, this is part of ensuring that Commonwealth support to each jurisdiction reflects the kind of equitable allocation of resources across the Federation that you would ordinarily expect.

**Senator HUGHES:** Mr Duggan, I asked this before: do you know how much the ACT government is contributing to this fund?

**Mr Duggan:** I don't have that information, so I'll need to take that on notice.

**Senator HUGHES:** Is it \$7½ million, is it \$15 million, is it \$140 million—do we know?

**CHAIR:** I think Mr Duggan has said that he doesn't know.

**Senator HUGHES:** I'm looking for a ballpark. Are we the same—

**Senator McAllister:** I am aware it's a longstanding program, and the ACT government has already committed substantial resources.

**Senator HUGHES:** I'm trying to understand whether \$7½ million is a substantial input into this program, or is it, as it would appear, a nice little bit of 'Pocock-barrelling' going through the ACT in exchange for a vote because it is exactly what it looks like?

**Senator McAllister:** Senator Hughes, I have already entirely rejected that assertion, and it's a very political assertion. I think it's unhelpful in the context where officials are explaining to you a very straightforward negotiation that took place between the Commonwealth Treasury and each of the territory and state treasuries. I don't know why you keep returning to an alternative characterisation.

**Senator HUGHES:** Because—

**Senator McAllister:** An explanation has been given.

**Senator HUGHES:** Are there any other programs in the budget that are specifically for ACT programs? It's your budget, your programs. Are there any other specifically for the ACT?

**Mr Fredericks:** Again, we'll come back to you with an explanation as to why Treasury have chosen to put a separate item in the budget papers the way they've done, but the clear point is that the provision of expenditure noted here is merely part of the bigger energy bill relief package. As Mr Duggan said—



**Senator HUGHES:** It's a single line item in the program.

**Mr Fredericks:** It's based on equitable distribution to national funding to the states and territories, so there isn't any issue about this not being an equitable distribution of funding. The ACT is not getting any special treatment on that basis. The peculiarity as to why they get a separate line item—

**Senator HUGHES:** That's very peculiar.

**Mr Fredericks:** That's what we'll come back to you with—an explanation of why they're separate.

**Senator HUGHES:** Why Treasury needed to add somewhere in their budget \$7½ million as a separate line item, which is how it's published, is very relevant.

**Mr Fredericks:** Correct. You asked that question, and I've taken it on notice, but I don't want the inference left that this doesn't represent, in the package, as a whole, an equitable distribution of the national funding to all states and territories, including the ACT.

**Senator HUGHES:** Okay. So, as I asked, are there any other ACT-specific programs in the budget? And, if you'd like to take it broader than that, are there any other single state-specific programs?

**Mr Fredericks:** We will take that on notice because that's, in fairness to you, a question we should come back to. My point is, if the inference is that this is an ACT-specific program, it's only an ACT-specific program because it's part of the national program where each of the states and territories have negotiated a different outcome following an equitable distribution of funding to them.

**CHAIR:** I'll get you to move on.

**Senator HUGHES:** I'm just trying to understand why it's a separate line item. It's not a relief payment. It is a low-cost loan, which is a very different program. We don't have any sense as to what the ACT government contributes here and how equitable those contributions are. We don't understand the criteria for accessibility and whether or not they will be similar or different to other states. We've also got a situation where it's not really equitable when ACT is getting a considerably smaller bump in its prices compared to a lot of other states, whereas, if we were looking at all Australians getting similar kinds of funding in relation to their power bills going up—I don't even understand why it's necessary?

**Mr Duggan:** Just on that—

**CHAIR:** I think the department has said that they will take that on notice to give some further detail.

**Senator McAllister:** I think Mr Duggan has additional information to provide, and he has already indicated the complicated dynamics that arise should you try and impose a one-size-fits-all solution on to each state and territory. There were particular circumstances in the ACT that meant a particular arrangement was required to be negotiated. But Mr Duggan may have something else he wishes to address.

**Mr Duggan:** Just to add to that final point you made, Senator, the Australian Capital Territory commensurate with the fact that the expected increase in electricity prices next year is less than it is in other jurisdictions. The bill relief component of the package is also expected to be less at \$175 per eligible household, so not the \$500, for example, that you get in New South Wales, Queensland, South Australia et cetera. So, in a sense, to achieve equity across jurisdictions, you see that additional line item.

**Senator HUGHES:** Does that apply to small businesses, or is there any small business stuff here? Going through what we went through before, small businesses in New South Wales, Queensland, South Australia, WA and Tasmania are looking at around \$650 for their bill relief, whereas the ACT small businesses are already looking at around \$950, and their increases are going to be less, as we just established. So is there anything within that package for small businesses to boost the other states in line with the ACT, considering they're going to have greater cost increases?

**Mr Duggan:** In the ACT's context, the ACT government is actually lowering electricity tariffs for all businesses through its large-scale feed-in tariff scheme. That's an ACT government initiative; that's not an Australian government initiative. In that context, Treasury's expectation is that that would see a business with average electricity consumption receive relief of about \$624 each year. That's in addition to an Australian government contribution of \$325—

**Senator HUGHES:** Which is the same as is being made to every other state—

**Mr Duggan:** It's the same as every other jurisdiction.

**Senator HUGHES:** even though those state's businesses are going to have higher cost increases.

**Mr Duggan:** At a business level, it's the same contribution. It's \$325 from the Australian government, as it is in New South Wales, Queensland, Western Australia, South Australia, Tasmania and the Northern Territory. On a

business level, that's correct: it's the same. At the household level, it's providing less, hence why you see a household measure which then achieves that equity across jurisdictions for the household.

**Senator HUGHES:** We will keep looking into this.

**Senator VAN:** Can I just put a question on notice? I'll be done very quickly. Are you able, on notice, to provide us with a table of what contributions, residential and business, federal government are making across states?

**Mr Duggan:** We can do that on notice.

**CHAIR:** Maybe I could just ask you a quick question on this point. Could you just explain, for clarity, why a one-size-fits-all approach wasn't taken here, and why you had to negotiate with each of the states to get an outcome on these payments?

**Mr Duggan:** Certainly. Just to clarify again, the negotiations were done by the treasurers—

**CHAIR:** By Treasury, yes.

**Mr Duggan:** supported by the Treasury. But, essentially, it's all based on the fact that the anticipated electricity price increases differ between jurisdictions, and that is for a variety of different reasons. Some of them operate under different electricity regulatory frameworks. Others, to a greater or lesser extent, faced the impacts of rising fuel input costs that we saw last year, be they gas or coal prices or whatever they might have been. Consistent with that, the way that the government approached those negotiations was with an overall intent of delivering for the households in the order of \$500 per household in electricity price bill relief for those jurisdictions which were expected to experience the largest increase in electricity prices. But then it stepped down for jurisdictions that were expected to have lower electricity prices. As I said, in the ACT's context, my recollection is that price projection for next financial year was in the order of a two per cent increase. So a \$500 bill rebate would have actually reduced electricity bills in the ACT, hence why there was a tiering to instead provide \$175 of support rather than \$500 of support.

**CHAIR:** Would it be right to say that the states all have differing manners of dealing with their energy within those state boundaries and within the bounds of their roles and responsibilities?

**Mr Duggan:** Indeed. That's probably a couple of hours I could spend talking you through all that! But the short answer is yes.

**CHAIR:** Okay. That's just as a point of clarity that the system going to each state is based around the role that they play within their jurisdiction in the energy space to ensure that an equitable outcome was negotiated by Treasury with the states in question.

**Mr Duggan:** Indeed. In some jurisdictions, the price outcome is more or less market driven. In some jurisdictions, the regulators will set a price. For example, the Northern Territory is broadly in line with what they see in CPI inflation, and they have mechanisms through which they then come back and support the electricity generators to be able to support a meter price of that amount. That is distinct from New South Wales and Victoria, for example, where it's more of a market-driven price outcome.

**CHAIR:** Thank you very much. On that, we will suspend for afternoon tea.

#### **Proceedings suspended from 15:29 to 15:46**

**CHAIR:** We will resume. Senator Cadell.

**Senator CADELL:** I have some questions from all over the shop because I'm just clearing up some loose ends, if I may. Regarding the Powering the Regions Fund—and this is just about a definition; it's not a specific thing—different departments use different definition of regions. Which one does DCCEE use?

**Ms Evans:** I don't know that we have a specific definition of regions, per se. For the purpose of the Powering the Regions Fund, the different elements of that are targeting types of entities, many of which are in regional areas, hence it fits with the concept of powering the regions. I might ask Ms Rowley to go through the three main programs.

**Ms Rowley:** There are three key streams of the Powering the Regions Fund, and, as we say, it is more about the activity than specific definitions about regions. The first is the \$600 million safeguard transformation stream. That's going to be targeting support to trade exposed facilities covered by the safeguard mechanism, so it's assisting them in decarbonising or reducing their direct emissions.

**Senator CADELL:** But not directly related to regions, it can be—

**Ms Rowley:** It is not limited to geographic location of those facilities; it's about the trade exposure and safeguard covered. Most of those facilities are in an area that would conventionally be considered regional, rather

than metropolitan, but it is not limited by geography. The second is the \$400 million for the Industrial Transformation Stream, and this is open to any existing facility or new clean energy development in regional Australia to support projects that reduce their direct and electricity related emissions.

**Senator CADELL:** And that says regional Australia.

**Ms Rowley:** The specific definition with respect to regional Australia there will be articulated in the program guidelines—

**Senator CADELL:** It's not yet articulated.

**Ms Rowley:** but that is a regional Australia program. Then the final main stream is the \$400 million Critical Inputs to Clean Energy Industries stream, and this is providing targeted assistance for primary steel producers, cement, lime, alumina, and aluminium sectors to, essentially, support the sustained domestic production of those critical inputs to support and ensure that Australia's clean energy transition can continue.

**Senator CADELL:** Once again, not regional? That one's general?

**Ms Rowley:** No, although if you think about where our primary steel producers, our cement and lime producers and our alumina and aluminium sectors are, again there's a heavy regional focus towards them, but it is specific to the activity not the location.

**Senator CADELL:** That's the interesting point, because in New South Wales politics—I'm a New South Wales senator—with funding for the regional seniors card, Newcastle local government area doesn't qualify as regional, and Lake Macquarie and Port Stephens do. Under the same guidelines, something like InfraBuild, which is a steel manufacturer on the old BHP site, would not qualify as regional, but Tomago, across the river—a chip and a putt—would.

**Ms Rowley:** That's not the case for this program. This will be about the activities.

**Senator CADELL:** Minister, you mentioned stuff about not having a nuclear power industry in Australia, but there was just under \$4½ million for nuclear programs for DCCEEW in the budget, for subs. What's that for?

**Mr Fredericks:** I might have to correct this tomorrow if I get this wrong, but in a sense it's funding to enable the department to support the minister for environment in EPBC decision-making that will be required to support the nuclear submarine program.

**Senator CADELL:** Just ongoing down the track?

**Mr Fredericks:** It's because of the expanded demand on EPBC decision-making because of the nuclear submarine program.

**Senator CADELL:** I'm sorry this is all over the place, but Driving the Nation is winding down. How are we tracking on those outcomes? It's being replaced by NEVS and all these other things. It's a different focus. Are we tracking the outcomes of how Driving the Nation went, and how are we going as the funding comes down, on outcomes?

**Mr Ryan:** Driving the Nation, in the October budget, was increased. It was formerly known as the Future Fuels Fund. It was doubled. It was \$250 million. It was doubled to \$500 million. There are a number of elements of funding for that. One is one we talked about, with NRMA and the 117 chargers. Another one is hydrogen highways, partnering with states and territories to roll out hydrogen for long-haul freight on major highways around Australia. There's work underway in terms of making that money available. Most advanced there is New South Wales and Victoria's joint project for hydrogen refuelling along the major route between Sydney and Melbourne. There is further funding for ARENA to continue to roll out the support of infrastructure for electric vehicles, looking at, again, demonstration projects around managed charging and innovation in charging. They're the elements. Some of the money for that is still in the out years and has not yet been committed in all cases.

**Senator CADELL:** There have been some commitments, though, haven't there? There is a fleet line open at the moment.

**Mr Ryan:** Some commitments that would have been announced that you would have heard include the Depot of the Future, in Sydney, which is a battery electric light commercial vehicle back to base for about 30 to 40 vehicles. That's been announced. There was also an announcement—I think it was Origin Energy—for managed charging, providing the charging infrastructure and the vehicles on a leasing, rental-type basis as opposed to capital outlay upfront. I think that was another one that was announced. There have been a number of those.

**Senator CADELL:** Is it popular?

**Ms Evans:** The Australian Renewable Energy Agency, which is administering that program, is on later tonight, so you can get more details from them.

**Senator CADELL:** I'll grab them then. Thank you. There was funding allocated in 2024-25 for the Offshore Electricity Infrastructure Act. What is the plan on that? What's that for? Is that for approvals again, or planning?

**Mr Gaddes:** There was a range of funding in the budget this time. Some was funding for accelerating the rollout of the offshore wind areas. There are a range of priority areas around Australia, some of which have been announced and some of which are being consulted on at the moment. There are another four to go, I believe. It's to accelerate that. The second one was for the development of an industry growth strategy. There is also some additional funding in the budget for NOPSEMA and NOPTA, the National Offshore Petroleum Titles Administrator, which does the licensing administration for us. And NOPSEMA is the offshore regulator.

**Senator CADELL:** How big is your acronym chart at the office!

**Mr Gaddes:** It's pretty big, and, whenever you move from one area of government to another, you have to get a new chart, so it's always a bit of a challenge. They're the titles administrator and the regulator, and they'll be cost-recovered down the track, but, because there is no industry currently, they need an allocation to start with, and then that will be recovered over time.

**Senator CADELL:** This also might be in your area: 2022-23 had just under \$17 million on securing urea—

**Mr Gaddes:** No, that's a different area.

**Senator CADELL:** Energy efficient communities—are we on that one?

**Mr Gaddes:** No.

**Senator CADELL:** Okay. Don't worry about that one. Hi, Ms Lello. On urea: for the financial year we're currently in there is \$17 million on securing urea, but there's nothing going forward.

**Ms Lello:** The measure to secure Australia's supply of urea was a measure which was used to support, or pay for, the production of urea at Gibson Island through the period when there was the diesel exhaust fluid crisis. There is now another measure in the budget relating to diesel exhaust fluid, so that Gibson Island contract is now finished and all of that money has been paid out.

**Senator CADELL:** So was the \$16.9 million fully utilised?

**Ms Lello:** Let me go to the details of that. There was an aspect of the contract which wasn't fully utilised because Gibson Island wasn't able to produce technical grade urea at the plant, but other than that it was fully utilised. I can get you the details on that.

**Senator CADELL:** That would be wonderful.

**Ms Lello:** The total value paid out under the contract was \$24.8 million in the end, and that comprised a number of call options while Gibson Island wasn't producing.

**Senator CADELL:** Could we go to the Incitec Pivot and the safeguard mechanism? They got captured. With the inflation thing for farmers out in the field and everything we do there, I think they're one of the unintended consequences of pushing that through the supply chain. How is the inflation lens on Incitec Pivot, rural production and those sorts of things? Did we look at inflation—specific cost increases—by industry, case and region, or was it just an overall mechanism on that?

**Ms Rowley:** With respect to the potential cost impacts of the safeguard mechanism, the main analysis that we did was to understand the outlook for compliance costs for facilities. That informed the policy design settings for the safeguard mechanism, and it supported the inclusion of a range of flexible compliance options—the use of credits for facilities that can beat their baselines, the ability to sell those to other facilities above the availability of offsets, the use of banking and borrowing in the scheme. The key analysis was around how we can moderate the potential compliance costs for facilities right across the board, rather than detailed analysis of cost impacts at sectoral level or for pass-through to consumers.

**Senator CADELL:** My last question is to you, Mr Duggan. You said something that clarified a lot for me. When we were talking about the 80 per cent target, we were talking about the growth of new renewables but also the diminution of established things. The New South Wales Premier is talking about extending the life of Eraring. That was due to close by 2030. If it goes beyond 2030, would that be a risk to that 80 per cent target just by virtue of the fact that it is staying open longer?

**Mr Duggan:** Senator, it's a hypothetical, firstly. Secondly—

**Senator CADELL:** It's a policy discussion now. They're talking about extending the life.

**Mr Duggan:** Secondly, it really depends on what else is happening within the market at the time. Obviously, mathematically with the scenario you've just described, where you have no other change in the sector, I think you

get the result that you've indicated. Of course, there would be other things going on at the market at the same time, so it's very difficult to draw a firm conclusion about what the impact would be.

**Senator CADELL:** Just to clarify, not only do we have to build enough; we've got to close enough, too, don't we?

**Mr Duggan:** That's correct. We will need more electricity generation in gross terms in order to meet Australia's needs in 2030. Part of decarbonisation is, effectively, electrifying higher emissions use of energy and putting it through the electricity grid because on average there are lower emissions from the electricity grid than from those other sources. Notwithstanding the fact that we are expecting to become more energy efficient over time, we still expect that there will be more demands on the electricity sector. What that means is that we need, in aggregate, more generation, and it's the distribution of that generation across fossil fuels and renewables that will make a big difference to what the emissions projection profile looks like for the electricity sector.

**Senator CADELL:** Thank you, Chair.

**CHAIR:** Senator Waters.

**Senator WATERS:** Hi, folks. I have some questions about carbon capture and storage. Is the department looking at financing any carbon capture and storage projects at the minute?

**Ms Evans:** Yes, there are a number of programs, and Mr Gaddes will be able to elaborate. There are some programs that we're continuing to administer that existed from the previous government, and then there is the carbon capture and storage technologies program.

**Ms Zerger:** In terms of carbon capture and storage programs, there is the CCUS development fund, which was announced in September 2020, with \$50 million over three years, and funding for that is due to finish this financial year. In addition, there's the carbon capture technology program as well, which was announced in the previous budget.

**Senator WATERS:** Can you give me the stats on that one, please?

**Ms Zerger:** It's still starting. It was announced as a \$141 million program—this is the carbon capture use and storage technologies program—and we're still in the process of finalising guidelines, so it hasn't yet opened for funding.

**Senator WATERS:** I see. So it was just in the most recent budget, was it—the \$141 million?

**Ms Zerger:** It was in the October budget.

**Senator WATERS:** And is that over three years or four?

**Ms Zerger:** I understand that was over eight years.

**Senator WATERS:** You said you're still setting it up.

**Ms Evans:** That's right.

**Senator WATERS:** Can you run me through the steps that you'll take in that process?

**Ms Zerger:** We're in the process of developing guidelines for that program.

**Senator WATERS:** When do you think the earliest would be that money would flow?

**Mr Fredericks:** I think the program is anticipated to open in the second half of 2023, with grants awarded and funding agreements executed in 2024. So the answer to your question is 2024.

**Senator WATERS:** Thank you. Do you already have a sense of who might apply, or is that a little premature at this stage?

**Ms Zerger:** Not who will apply—but the program does have a bit of a different focus, away from CCS deployment itself. It was more about research, development and demonstration of novel or emerging carbon dioxide capture and utilisation technologies, with direct air capture being one of those.

**Senator WATERS:** Okay. Could you give me a little bit more detail, on notice, please, of the difference in parameters between the two? You've hinted at it there—thank you—but a bit more on notice would be great.

**Ms Zerger:** Yes.

**Senator WATERS:** I understand that the Gillard government gave Chevron \$60 million for their CCS project, which is largely regarded as having failed, given that it only stored 30 per cent of what was promised. Does that mean the Commonwealth can get back the other 70 per cent?

**Mr Fredericks:** I think we'll have to take that on notice.

**Senator WATERS:** I won't hold my breath for your response!

*Senator Cadell interjecting—*

**Senator WATERS:** I beg your pardon?

**Senator CADELL:** The answer will rhyme with 'go'.

**Senator WATERS:** Indeed! The budget papers list a contingent liability against the department's name, which is an indemnity for Chevron's Gorgon CCS project. How long will the government be exposed to that financial liability?

**Mr Fredericks:** I'll just have to see if my CFO is here. He's not. I'll have to take that question on notice.

**Senator WATERS:** Okay. Is the person in the building?

**Mr Fredericks:** The Chief Financial Officer would be the only person capable of answering that question in this room, I think. Can I take that on notice for you?

**Senator WATERS:** Sure. Are they back today?

**Mr Fredericks:** No.

**Senator WATERS:** Right. Are they here tomorrow, by chance?

**Mr Fredericks:** I'll see how we go.

**Senator WATERS:** Okay. Great. The other aspects in relation to that indemnity that I'm interested in are whether or not it requires any upfront or ongoing costs from the Commonwealth, why it needed to be put in place in the first place and whether or not it's got a legislative basis. I understand that it does, so I'm interested in whether any future CCS project would also be able to receive similar indemnities. I'm not sure if the minister knows whether that's a policy approach of government to desist in issuing those indemnities, or whether there's any change of policy there from the previous government about indemnities.

**Senator McAllister:** I think I will have to take that on notice. I think, broadly, the government is seeking to enhance regulatory certainty for projects of this kind, but I don't have any detail about the particular question you ask around indemnities.

**Senator WATERS:** Thanks for taking that on notice. That's all from me.

**CHAIR:** Senator Hughes.

**Senator HUGHES:** I just wanted to have a look at the safeguard mechanism. The government has undertaken to ensure there are sufficient ACCUs for the market, which it will sell at \$75. Presumably, to have enough credits on hand, the government would need to have been purchasing some ACCUs. Has this occurred, and when did it occur?

**Ms Rowley:** The government has been purchasing ACCUs, previously under the Emissions Reduction Fund and going forward under the Powering the Regions Fund, for some years now. In terms of the supply that might be available to the safeguard mechanism cost-containment reserve, there are over 100 million ACCUs contracted to the government under a mix of fixed and optional delivery contracts out to 2030. We've only just recently changed the rules so that the Commonwealth can hold those ACCUs in an account such that they can be available for use in the cost-containment reserve, but going forward there are very large volumes contracted.

**Senator HUGHES:** Okay.

**Ms Rowley:** Sorry, just adding that, under the Powering the Regions Fund, the government will continue to purchase ACCUs over the coming years.

**Senator HUGHES:** It was included as a budget measure. Where is it in this budget?

**Ms Rowley:** As I said, the purchase of ACCUs under the previous government was under the Emissions Reduction Fund. It's now under the Powering the Regions Fund. It's one of the streams, separate from the streams I was speaking to just previously, and the Powering the Regions Fund was specifically articulated in the October budget with some additional details articulated in the current budget.

**Senator HUGHES:** So coming out of that Powering the Regions Fund is the cost of the ACCUs?

**Ms Rowley:** That's right.

**Senator HUGHES:** How much is it expected to cost the government to ensure that there are adequate ACCUs? And, conversely, how much is it maybe budgeted to earn the government, particularly if it's purchased low and sells higher? Where in the budget papers is that looked at?

**Ms Rowley:** There are couple of things. The cost to the government of purchasing ACCUs, up until now, has been released by the Clean Energy Regulator, who conducts the auctions on behalf of the government. At the end of each auction, it reports the average price for the volume of ACCUs purchased at that auction. The most recent

one was about \$17 a tonne. That was the auction run in March of this year. But there have been a series of auctions over the past few years, so the price varies. In terms of the anticipated use of the cost-containment reserve, our expectation is that liable entities under the safeguard mechanism will have sufficient supply in the market at prices below the cost-containment reserve level, so we don't actually anticipate that there will be much, if any, call on that reserve. It's been built in as a guarantee, essentially, that, if costs do go high or if facilities have difficulty acquiring units themselves in the market, then the government will make that available for the purposes of their safeguard compliance at the time. You're correct to say that there could be a difference between the price at which the government purchases and that \$75 a tonne increasing by two per cent plus CPI each year, but the government has indicated all moneys from the operation of the cost containment reserve will be returned to the Powering the Regions Fund to support further emissions reduction in Australia's economy going forward.

**Senator HUGHES:** Could that possibly be a loss to the fund if—

**Ms Rowley:** In the event that there is a substantial call on the cost containment reserve, then, yes, there could be a significant difference between the price paid and the price received. However, as I say, that all gets recycled back to the Powering the Regions Fund to support further emissions reductions.

**Senator HUGHES:** But that could be negative if by chance they went in excess of \$75 and the government had to sell at \$75?

**Ms Rowley:** Sorry?

**Senator HUGHES:** If the government had to purchase ACCUs over the \$75 or sell them, there could actually be a loss.

**Ms Rowley:** To the extent that, in the future, the prices got very high, then, yes, there could be, but, as I said, there are over 100 million ACCUs contracted to the government over the period between now and 2030 at prices well below that level. We do anticipate that will be more than ample—the volumes that are received by the government and held in that reserve. We don't anticipate substantial calls on that reserve at all.

**Senator HUGHES:** Is that \$75 cap at any stage going up? Obviously, as time goes on and inflation is increasing and all those sorts of wonderful things, it might not be that long until we hit \$75. Is there an indexation with it?

**Ms Rowley:** Yes, for the current financial year of compliance, it starts at \$75 a tonne, and then it will increase by two per cent plus CPI each year.

**Senator HUGHES:** That's what the cap is increasing by, not the expected—

**Ms Rowley:** That's right: the price point for that cost containment reserve increases by two per cent plus CPI each year, and the future policy settings are subject to future policy reviews.

**Senator HUGHES:** I assume the 100 million ACCUs that are held by the government are being budgeted as an asset somewhere.

**Ms Rowley:** They're contracted to the government under, as I said, a mix of optional and fixed delivery contracts. The funding for those is reflected in the previous Emissions Reduction Fund and the Powering the Regions Fund.

**Senator HUGHES:** Alright. Can we move on quickly to CBAM? I note in the budget that \$3.9 million has been allocated over two years from 2023-24 for a review into an Australian CBAM. Could you explain what that review is going to entail?

**Ms Rowley:** Yes. It's kicking off from the middle of this year, so it is very early stages. We anticipate that there'll be a small team established within the department with contributions from the different departments across government that have an interest in the issue—CBAM being a carbon border adjustment mechanism, for those not familiar. During the consultations on the safeguard, we heard very clearly from industry an interest in policy measures to address the risk of carbon leakage where production moves from jurisdictions like Australia to overseas, so the government, in recognition of that interest, committed to commence a review in the middle of this year. We anticipate that will take 12 to 18 months. As I say, it's very early days, but there'll be public consultation. There'll be discussion with respect to the policy options to address carbon leakage leading to advice to the government at the end of that review with respect to whether the safeguard policy settings are adequate or whether different policy approaches, including possibly a carbon border adjustment mechanism, might be necessary.

**Senator HUGHES:** Are there any concerns or considerations that over the 12-to-18-month period while the review is being undertaken there may be considerable leakage? Has there been some consideration of a possible figure for leakage over that review period?

**Ms Rowley:** Couple of things there—on the issue of the particular circumstances of trade exposed facilities and the opportunities and challenges that they face in decarbonising, I would note many of the companies that fall into this category have themselves set net zero goals and have been very actively involved in the design of the safeguard mechanism. However, there are two specific settings within the scheme that addressed the concerns of trade exposed safeguard facilities. Firstly, there's the stream of the Powering the Regions Fund, which I mentioned earlier. That's the \$600 million safeguard transformation stream, and that is available to provide funding to facilities that are trade exposed under the safeguard to support their efforts to reduce their emissions. In addition, there's the targeted funding for the critical inputs to clean energy industry. This is about steel, cement, aluminium, all those emissions-intensive sectors. There is \$400 million to support sustained domestic production as we move through this transition period.

Then the second design feature is within the scheme, and that's with respect to the baseline reduction rate that applies to trade exposed facilities that face relatively higher cost. They're the ones who are at arguably more particular risk of carbon leakage, and so for those facilities there is an ability to apply for a reduction in the reduction rate. For most facilities baselines will decline by 4.9 per cent a year, and for these trade exposed facilities that face relatively higher costs, based on this cost assessment, they could get a softer decline rate. That's down to a minimum of one per cent per year for manufacturing facilities or down to two per cent a year for non-manufacturing facilities. The intention of what we call trade exposed baseline adjusted arrangements is to moderate the costs that those facilities face.

**Senator HUGHES:** Please just bear with me while I work through one scenario, if you like. If you have someone who brews beer, they have two options. They can either buy aluminium cans in Australia with the aluminium affected by the safeguard mechanism, or they can import aluminium cans that are subjected to the government tax on top of importing aluminium. Has there been any modelling done on whole-of-supply chains? That would include your impact on the aluminium. What are the costs to the actual can manufacturer? What are the costs to the brewer? And what are the additional costs that will then flow through to the consumer? I'm trying to understand that supply chain, where businesses are impacted at different points. Has there been any modelling done as to what would be coming out at the end in an inflationary environment? How much of these costs are going to be passed on to the consumer, so adding to inflationary pressures?

**Ms Rowley:** The short answer is no, there has not been modelling of the cost passed through at the consumer level. The analysis that we have done has focused, as I was saying earlier, on the potential costs and opportunities because for some facilities, who can do better than their baseline, the safeguard mechanism provides an opportunity to generate credits that can be sold to others. There's a range of design features informed by the analysis that was done to minimise the compliance costs faced by safeguard facilities. I would note that the vast majority of facilities and emissions covered by the safeguard mechanism are owned by corporates that already have net zero commitments and so are already charting their own path to net zero. One of the key drivers for—

**Senator HUGHES:** So why do we need the safeguard mechanism if they're already doing what they need to do?

**Ms Rowley:** One of the key drivers and one of the things we heard from industry was the value of a clear, transparent and stable policy architecture so that companies can make investments with confidence in charting those decarbonisation pathways. It's one thing to say it; it's another thing to really have a supportive policy environment to do it. That's what the safeguard mechanism provides for Australia's biggest industrial emitters, and that's one of the reasons why we've heard strong support for those reforms from businesses and from industry associations.

**Senator HUGHES:** I'm just interested and concerned that there hasn't been economic modelling looking at it through the supply chain and the impacts it's going to have. As Senator Cadell just raised, Incitec Pivot provides most of the fertiliser with regard to our food production across the country. That is an increase of input cost to farmers. Farmers might be individually excluded from the safeguard mechanism but they'll be paying for it through the purchasing of fertilisers. There'll be an input cost increase which will flow through to consumers. Just to confirm: there has been no modelling on the impact on the bottom line for consumers through the supply chain?

**Ms Rowley:** We have not looked at that, no. But I would reiterate that there are many settings in the design. Particularly to distinguish it from other carbon pricing policies that we can observe internationally and in Australia's own history, one of the distinguishing features of the safeguard mechanism is that facilities only have to buy credits or take action for the emissions above their baseline, so it's only a relatively small increment of their emissions that they need to pay a compliance fee for. That is another thing, in addition to those flexible



compliance options I referred to, that mitigates the cost impact on the facility and therefore the cost passed through.

**Senator HUGHES:** It's either, on the one hand, going to be a really active market and ACCUs and all of those things are going to be happening, or, on the other hand, nothing is going to be happening because they've only got to do a tiny little bit and it won't be a problem for them. It just seems a very contradictory policy setting.

**Ms Rowley:** Sorry; can I just clarify there that it's not that they only have to do a tiny bit. It's that the portion of their emissions that attract a fee is small at the start. It builds over time as the baselines ratchet down, but, at the same time, we anticipate that companies will be making investments to reduce their own emissions in accordance with their publicly articulated emissions reduction goals.

**Senator HUGHES:** Are the companies included in the safeguard mechanism, who are going to be impacted by it, the only companies that can sell to other safeguard mechanism impacted companies? For example, a pharmaceutical company I know has exceeded all of its plans to make net zero by 2050, and I think they're going to hit, sometime around 2030, much easier savings that they can make on their emissions than some of these obviously emissions-intensive industries. Could that pharmaceutical company then generate its own ACCUs to sell, or is it that because they're not in the safeguard mechanism they can't do that?

**Ms Rowley:** There are two different kinds of credits to keep in mind. Within the safeguard mechanism budget, all of the covered facilities, if they beat their baseline—if they keep their emissions below their baseline—are eligible to get safeguard mechanism credits, which they can sell to other safeguard facilities, who can use them for compliance if they're over. They could also bank them to use for later if they're looking forward to what their obligations will be. ACCUs, Australian carbon credit units, are generated by facilities elsewhere in the economy, and there are a range of activities that are eligible to generate ACCUs. If the pharmaceutical company in your example were doing a project that was consistent with a method under the Australian carbon credit units scheme and got that project registered, then they could generate ACCUs from that, but it would need to be demonstrably additional, real, permanent emissions reductions beyond what they would otherwise be doing.

**Senator HUGHES:** A Climate Active tick was given to British American Tobacco for reducing emissions. The health department wrote a letter, and that tick was unilaterally removed. Would British American Tobacco, who make genuine emissions reduction efforts and make emissions reductions in their business, be able to use those projects to get ACCUs to then sell on, or is there a moral clause over who is allowed to do it, from an industry standpoint?

**Ms Rowley:** It's not so much a moral clause, but the eligibility requirements for carbon crediting are about companies that undertake—

**Senator HUGHES:** It should be about emissions reductions.

**Ms Rowley:** projects in accordance with approved methods and then go through all of the regulatory oversight from the Clean Energy Regulator to generate those credits. The Climate Active program is a voluntary program, as you know, and it's based on the guidelines that the government put in place back in 2019 but which were drawn to our attention by the department of health last year. Particularly where there's an optionality associated with government engagement with tobacco companies, then, based on the guidelines that were shared with us, we formed the view that it was inappropriate for us to be having that company as part of this voluntary climate action program.

**Senator HUGHES:** Was there any consultation with BAT to explain to them? We did actually ask for this on questions on notice last time and didn't receive very much.

**Ms Evans:** Sorry, I'm sure we fully answered both of the questions that were on notice for this one. So there was a comprehensive answer provided.

**Senator HUGHES:** I've got it. I wouldn't call it comprehensive.

**Ms Evans:** That included an explanation that there are clear government-wide guidelines that were established in 2019 that said government certification marks should not be used where they're used to promote a sense of corporate good, which is what the Climate Active mark does. They should not be associated with tobacco companies, and so we quite rightly reviewed our stance on British tobacco and have resulted in them no longer using the certification.

**Senator HUGHES:** I just asked: were they notified at all?

**Ms Evans:** We told them that we had understood the guidelines and that we were moving to withdraw it.

**Senator HUGHES:** That wasn't provided as part of the answer, just to put that on record.

**CHAIR:** Senator Van.

**Senator VAN:** Going back, as I was saying before, to questions about transmission costs, who ultimately bears the cost of building transmission?

**Mr Duggan:** Transmission costs are taken into consideration by the Australian Energy Regulator in setting tariffs. In the case of certainly those parts of the market where those assets are privately-owned assets that are regulated, those costs ultimately are passed on through to the consumers.

**Senator VAN:** Given that those assets are regulated and earn a guaranteed rate of return for the life of the project, which I think which is normally 20 or 25 years minimum, that can end up costing energy users an awful lot of money, can't it?

**Mr Duggan:** Yes. Basically, as part of the energy infrastructure that users are utilising—in addition to the generation, of course, they benefit from the transmission—yes, they bear some of the cost. Governments also bear some of the cost to this as well. So useful to think, for example, around the Rewiring the Nation program, they're a concessional debt facility, which is intended to bring down the cost to consumers of transmission infrastructure. So, between the Commonwealth government, state government, proponent and consumer, there's a distribution of costs.

**Senator VAN:** But the proponent doesn't wear any of that cost. They wear the up-front costs, but then they get a regulated return on that for decades.

**Mr Duggan:** That's correct. So, in the consideration of the regulated return and what's reasonable on a particular asset, that's right: essentially the return is on top of the cost base. So that's correct: the proponent wouldn't, because they get a regulator return, incur a loss on those investments.

**Senator VAN:** They make a profit.

**Mr Duggan:** A regulated return, yes.

**Senator VAN:** Every year it goes to their shareholders in Hong Kong or wherever they're based. So what cost do you use in your modelling for, let's say, 550 KVA transmission? I assume you put some costs around it when you were putting forward policy positions for suggestions to government.

**Mr Johnson:** We don't do our own modelling on the costs of transmission. We rely on the cost database and the modelling done by AEMO. AEMO and AER both have their cost databases. AER has a specific one that it uses and draws upon when it does the approvals that Mr Duggan was referring to of transmission application for cost recovery.

**Senator VAN:** Which is different for different projects, but it averages out about—

**Mr Johnson:** Yes, and it varies over time.

**Senator VAN:** Yes, but, at the moment, it's around \$9 million per kilometre, isn't it?

**Mr Johnson:** That very much depends upon the specification of the cable. You said 500 kv.

**Senator VAN:** I said 550.

**Mr Johnson:** It would also depend on the topography, where it's going through and things like that, so it's very project specific.

**Senator VAN:** Let's pick VNI West, which is serving shareholders of foreign companies that have built VRE out in a region that had no transmission. When you say the users are paying for the use of that, they're actually paying for the generator to get their product to market, not the other way around, aren't they? There are other ways for those users of energy to get energy to where they need that load.

**Mr Johnson:** What AEMO does in trying to make recommendations around which transmission investments should be pursued is look at the total cost to consumers. The transmission projects that are specified in the 2022 Integrated System Plan, both the actionable projects and the future projects, in total their cost amounts to around seven per cent of the cost of investment in generation, storage and transmission over the period of 2050.

**Senator VAN:** That is an awful lot of money.

**Mr Johnson:** It's the least cost. If you do not pursue those investments, you would have to spend more money on alternative generation and storage to meet the same level of reliability and security.

**Senator VAN:** If we had AEMO before us—trust me, I wish we were able to call them before us—I would contest that, but, luckily, we've got the next closest thing, AER, coming up a little bit later on. Given it's an enormous cost, it produces no electricity and it stores no electricity, and when we've heard testimony today that Australia needs more energy in its system if it's going to reduce emissions and be able to power green iron, green aluminium, green hydrogen and all these other things to replace other exports, what modelling has been done by

your department, not AEMO, to satisfy yourselves that this is the best policy that you can recommend to government?

**Mr Johnson:** We have not done specific modelling. It's very difficult to do modelling that does not involve things like power-flow analysis, and AEMO is best placed to do that.

**Senator VAN:** But AEMO don't do their own analysis, do they?

**Ms Gowans:** Yes, perhaps if I could just add: in the Integrated System Plan, which, of course, is badged for AEMO, it is an extensive consultation process with industry. More than 1,000 stakeholders would ordinarily engage in the production of the Integrated System Plan, and very high-level data analysis is done. So, in terms of modelling the optimal pathway for particular projects in the system to be connected to the network, that integrated system planning by AEMO is a world-standard integrated system plan. I'm not saying it's perfect, and I'm not saying that every assumption in it cannot be questioned or cannot be looked at, but it is a very high-level exercise of modelling done every two years to look at that, and our department relies on the advice of market bodies and other experts in the system in relation to what it is that the energy system needs. Here, yes, it's true that transmission doesn't generate and doesn't store, but there's no way for the electricity supply to be connected to the demand—

**Senator VAN:** What a great point! Why not? We've talked about rooftop and other ways of generating. There are plenty of ways to do this without hundreds of billions of dollars in transmission that doesn't actually add anything to the grid. Why not behind-the-meter services? Why not aggregate in being able to do DER? Why not invest in that? We didn't see anything in the budget for being able to do coordinated distributed energy.

**Ms Gowans:** Consumer and distributed energy resources are incredibly important resources for the energy system. In the regulatory investment test for transmission, the model is required to consider whether or not that need can be met through distributed energy resources. When the net customer benefit test is being applied, it is being applied in comparison to an alternative path. Essentially, that's the way the net benefits test works. It looks at all the different possible ways of meeting that need and then—

**Senator VAN:** Are you sure? Have you satisfied yourselves that this is actually true? I can't satisfy myself and I used to work for AEMO, so I have some history in this space. Given AEMO's stakeholder base, its membership, is largely made up of distribution companies, I can't satisfy myself that this is actually the best thing for Australian energy users and consumers and taxpayers, can you?

**Ms Gowans:** As the department of climate change and energy, we rely on the advice of experts, including the Energy Market Operator, when they advise us about how they operate the market, what is necessary and what is in the best interests of Australian consumers for that market to operate. I don't apply my own opinion—

**Senator VAN:** But do you sanity-check it? Do you actually go back and, on the back of an envelope—and I can sit down and do these exercises with you.

**CHAIR:** Senator Van, ease up on—

**Senator VAN:** I'm just being helpful.

**CHAIR:** Or condescending—one or the other.

**Senator VAN:** I was really trying to be helpful; I promise you. The ISP talks about tens of thousands of kilometres of transmission. If you multiply that by that number I used before—\$9 million per kilometre—we're talking about an awful lot of money for the consumer, the taxpayer, that could otherwise be spent on other ways to generate electricity—to reduce emissions—closer to the load or with other alternatives. Have you really satisfied yourselves that this is the best way forward? Can you, hand on heart, say that, Mr Duggan?

**Mr Duggan:** In terms of the figure that you quoted, the tens of thousands, with the way AEMO projects forward the needs, I think we're talking about 3,000 kilometres, broadly, of transmission lines by 2030.

**Senator VAN:** That's in actionable projects.

**Mr Duggan:** Yes.

**Mr Johnson:** It's 3,000 by about 2030 and 10,000 by 2050, under the step-change scenario.

**Senator VAN:** Yes.

**Mr Duggan:** That's correct. As Ms Gowans referred to, what they're trying to solve for is the best economic solve to achieve what we need to achieve by 2030 through the ISP. They're taking into consideration all the potential sources of electricity generation, storage et cetera, as well as the optimal mix of generation, storage and transmission. In that context, that's what sits behind their 3,000 kilometres worth of transmission. From the government's point of view, there are elements of that in which the private sector will see a commercial

opportunity to be able to fully finance on their own. A lot of the variable renewable energy generation, for example, will not require any government assistance to be highly profitable, so the government need not design large policies that are directed at introducing more of that into the grid.

The government is focused around the big bits of public infrastructure, where it's either too large in aggregate or not economic individually, in terms of the assets, to be able to provide a public investment into that transition. That explains the Rewiring the Nation plan and the concessional debt to take some of the cost pressure off consumers in that regard. Similarly, there's the Capacity Investment Scheme to try to provide the firmed renewable storage capacity et cetera that will provide—

**Senator VAN:** If I had more time we'd get into that capacity mechanism.

**Mr Duggan:** Sure.

**Senator VAN:** But my point is that you're not looking far enough forward if you think that more transmission is going to solve the problem that we're trying to solve here. There are plenty of technologies out there that will do exactly that. They all can be located right where the load is, so you don't have to—take offshore wind, for example. If you take those zones where there's great resource, like down in south-east Gippsland, in my great state of Victoria, you can bring all that ashore, close to where Basslink comes in or where the Marinus Link will come in; take advantage of existing easements; and keep costs down, and you've got good strong resource offshore.

I do not understand spending taxpayer money and then charging it back to consumers, either through higher energy bills or on the goods that they're purchasing, because the commercial users of energy are paying the bulk of that return on investment for the transmission. I cannot argue a case for rewiring the nation that stacks up in any way, shape or form for either taxpayers or energy users.

**Ms Gowans:** I would say one thing about rewiring the nation. Rewiring the nation leverages the Commonwealth's ability to secure finance at a competitive rate.

**Senator VAN:** I understand that—to take the money back off users.

**Ms Gowans:** Correct. It does not provide taxpayers' money into the project; it leverages the borrowing ability.

**Senator VAN:** I understand that. My point is that all that money then goes back to people through higher energy prices, on their bill. Mine is \$1.16 a day at the moment, even just adding VCI, which is going to add 75 per cent to the regulated asset base in Victoria. So my supply charge is already going up over \$2.

**Ms Gowans:** But, again, although there will be transmission use of service charges added to a bill, the wholesale component of the bill is expected to be significantly reduced through the amount of renewable energy that will be able to be generated and dispatched to the market as a result of these interconnector projects.

**Senator VAN:** Only if you're trying to connect up energy production that you could use and other more region and industry-building ways, if you just turn your mind to it. Thank you, Chair.

**CHAIR:** Thank you, Senator Van. Any point of clarity on that? No; in which case, we shall let you go. Thank you very much for your time.

#### Director of National Parks

[16:44]

**CHAIR:** I now call officers from the Director of National Parks to the table. Welcome, Ms Swirepik. Do you wish to make an opening statement?

**Ms Swirepik:** No, thank you, Chair, but I would like to thank the committee for the flexibility in fitting me into the program today. I am going to a board meeting at Kakadu tomorrow that is very important to be present at.

**CHAIR:** Not a problem. We will start with Senator Hughes.

**Senator HUGHES:** Thank you, Chair. I wanted to go to expansion of marine parks and, in particular, the Macquarie Island Marine Park. Minister, this might be for you. Julie Collins, the then shadow minister for agriculture, and Josh Wilson, the then shadow assistant minister for the environment, wrote to a number of fishing industry leaders—and I can get a copy of this, if that needs to be distributed—during the course of the 2022—

**Senator WHISH-WILSON:** Are you seeking to table it?

**Senator HUGHES:** We want to get copies for everybody; I've only got one. It is Josh Wilson's letter. He wrote to a number of fishing industry leaders stating:

While in the lead-up to the 2019 election we believed there was scope to consider adjustments to marine park zoning, we accept that since that time the network has been delivered in a settled form. We agree that certainty in park management is critical ...

I'm just wondering whose decision it was that Labor should, in its first year of government, propose adjustments to marine park zoning. In fact, these are pretty significant boundary changes. Was Ms Collins and Mr Wilson not telling the truth during the campaign? Or is it now Ms Plibersek and the Prime Minister or the broader cabinet that are seeking to break that promise?

**Senator McAllister:** I don't have a copy of the letter before me, but doubtless it will be circulated shortly.

**Senator HUGHES:** It was an election commitment not to make significant changes to marine parks, and now we have a significant change to a marine park.

**Senator McAllister:** Two points. I think from opposition it was clear to us that it was important to provide some certainty in relation to marine park management and, in particular, to not intervene to change marine park boundaries outside of statutory review processes and to ground decision-making in science and consultation. And that is the approach that is presently being taken by the minister. The South-east Marine Parks Network, which I understand your question relates to, came into force in July 2013 and expires in June 2023, so the arrangements for the park are being reviewed in light of that expiration. They're consulting. There's been an independent scientific report. Officials may be able to provide more detail about the work that we're doing, but it is in the context of a statutory review of a network that has been in place for a decade.

**Mr Mundy:** I'm happy to help expand on that matter. The election commitment which the Director of National Parks is currently in the process of delivering is one to consider any changes to the existing network of marine parks in the context of their regular reviews, which is currently occurring in the case of the south-east, and on the basis of stakeholder engagement and science, which are the key inputs that we'll be taking into account as part of that review.

**Senator HUGHES:** In this letter there's an acceptance by Mr Wilson that the network has been 'delivered in a settled form' and:

We agree that certainty in park management is critical and so we don't intend to revisit that matter outside of the statutory review processes.

But when you're talking about less than a year in time, it's either a very deceptive letter during the campaign or it's now a case that they've gone back on that pre-election campaign promise.

**Senator McAllister:** Senator Hughes—

**Senator HUGHES:** But it does—

**Senator McAllister:** I do need to respond to that, and perhaps you can then move on to your next question. I don't think that your preamble engages with the material in the letter. The letter says:

... a Labor government will ensure the statutory review processes of the national marine parks network are carried out in a timely and consultative manner, with any changes considered on the basis of science and stakeholder consultation.

**Senator HUGHES:** Alright, we'll stick with that, on the subject of consultation, which was a commitment. How many meetings has Ms Plibersek personally attended with Austral Fisheries and Australian Longline Fishing respectively about this review and her desire to triple the size of the park. I would have thought that would have required significant consultation. And what dates were those meetings held?

**Senator McAllister:** I will take that on notice. I don't have the minister's diary before me.

**Senator HUGHES:** If you can try and get back to us before tomorrow that would be great. It should be easily done, since the consultation has been so wide—according to you.

**Senator McAllister:** I will ask the officials to talk through the nature of the consultation, because ministers are supported in the work of their portfolio by a department, and I would be interested to hear the officials' explanation of the work that's been ongoing.

**Mr Mundy:** I can advise that the statutory consultations for both the proposed Macquarie Island expansion and for the review of the South-east Marine Parks Network are currently underway. They have been open for nearly 60 days now. They, in fact, close at midnight tonight. That's been the formal statutory vehicle through which stakeholders have the opportunity to provide input on those proposals. They have been reasonably well responded to, to date. We have received in the order of 14,500 submissions with respect to the expanded Macquarie Island Marine Park and some 13,500 on the intent to prepare a new south-east plan.

We haven't been just passively waiting for submissions to come in. The department has been very proactively engaging with all of the stakeholders who have an interest in the south-east and in Macquarie Island. My team and I have met with the fishing companies to which you refer at least six times through the course of the consultation to prepare the draft proclamation for Macquarie Island. I understand that the minister has also met with those companies, as has Minister Watt. I don't have details of those meetings, and they could be provided on notice. We

have also been endeavouring to engage as many other stakeholders as possible to ensure that we're getting the widest possible set of inputs. During the statutory consultation process, we have also met or sought engagement with seven state government agencies, eight First Nations organisations, nine commercial fishing industry associations, five recreational fishing organisations and representatives from the aquaculture, offshore industry and research sectors. These have been proactive endeavours to make sure we've got the best possible range of inputs from various sectors to help inform the preparation of the new plans.

**Senator HUGHES:** Do we have any indication of how many meetings Ms Plibersek did attend personally with the Australian Fisheries Management Authority, the Commonwealth Fisheries Association and Seafood Industry Australia specifically about this review and her desire to triple the size of the park? On what dates were those meetings held?

**Senator McAllister:** Consistent with my earlier response, we will take those details about those particular stakeholders on notice.

**Senator HUGHES:** We would like to know what consultation is actually being undertaken.

**Senator McAllister:** Yes, but I reiterate my earlier response, which is that ministers administer portfolios with the assistance of a department.

**Senator HUGHES:** This is a pretty significant change, so I would have thought the minister might have been a little bit interested herself.

**CHAIR:** Senator Hughes, your question has been taken on notice, because no-one has the answer—

**Senator HUGHES:** Thank you for the description of how I ask questions at estimates. Senator McAllister, you sat on this side not very long ago. So, without the condescension, I would like to continue asking my questions.

**Senator McAllister:** Senator, it is simply that officials are here trying to provide information to you. If you wish to make political characterisations about decisions taken by the minister, or indeed decisions taken by me to take matters on notice, then I will have, inevitably, a political response. But the officials are here and able to talk to you about the work they have been doing in the consultation process.

**Senator HUGHES:** I'm going to ask you: what consultations have taken place, with the fact that this government, despite what they wrote to the fisheries industry before the last election, is now trying to triple the size of a park? What I would like to try to understand is: what is the actual problem that is trying to be addressed through this action? This park has been incredibly successfully and sustainably managed, to everyone's benefit. So what is aiming to be achieved by the tripling of this marine park? Is it going through an inflationary lens or a productivity lens? We know this government has lenses for gender and diversity and everything else that they look at. What is the productivity benefit to the fishing industry and the tourism industry? What is the productivity benefit that was considered in the tripling of this marine park?

**Senator McAllister:** Senator Hughes, I'll answer an aspect of your preamble, and then I'll ask the officials to talk about some of the factors that they're considering as part of the statutory review. I don't think it is accurate for you to continue to characterise this process as being at odds with what was committed to prior to the election. The letter that you circulated says, 'We agree that certainty in park management is critical and so we don't intend to revisit that matter outside of the statutory review process.'

**Senator HUGHES:** Senator McAllister, we have very different viewpoints of what is driving some of these decisions. I apologise if you don't happen to see them through a political lens, but some of us do. So I will be continuing to ask budgetary questions about consultation and reviews that are taking place and what are the productivity benefits of—

**CHAIR:** If we could just let the department answer the question.

**Senator HUGHES:** I've asked the question, and the minister keeps interrupting.

**CHAIR:** Senator McAllister has finished.

**Senator HUGHES:** Chair, I will get my answer—

**CHAIR:** You will, but you will not—

**Senator HUGHES:** Well, if the minister—

**CHAIR:** Just wait.

**Senator HUGHES:** would stop getting antsy—

**CHAIR:** Senator Hughes, enough.

**Senator HUGHES:** because political pointscore—

**CHAIR:** Enough! This is not helping, going round in—

**Senator HUGHES:** What is the—

**CHAIR:** Okay. You do not have the call.

**Senator HUGHES:** What is the—

**CHAIR:** No.

**Senator HUGHES:** We will come back to it, because we still have questions on what the productivity—

**CHAIR:** I know you have questions, but what we are doing at the moment is going round in unhelpful circles, so I'm just going to stop you there and I'm going to ask Ms Swirepik if she could please answer the question about the consultation to the best of her ability.

**Ms Swirepik:** My colleague has outlined some of the statutory consultation that we've been undertaking at the moment, which includes a consultation period, and submissions close today. A number of meetings have been held by officials. The considerations, yes, are always in the protection of the marine environment—that's what marine parks are set out to do—and there is quite a lot of area around Macquarie Island, especially, where there is potentially a higher category of protection that could be warranted while still managing that with sustainable fisheries allowed in the region. That's exactly the type of thing that the consultation period sets out to look at, because they are marine parks aimed at environmental conservation. So the statutory period—as we've said before and as, in fact, is attested in this letter—is within the statutory process and will be informed by science and the stakeholders. So that's exactly what we're doing. I'm not sure—my colleague went fairly comprehensively before—

**Senator HUGHES:** I've still got questions, plenty of them, but I don't have the call, apparently, so I'll come back to it.

**CHAIR:** Yes. That would be lovely. We'll just take a rotation and we'll go to Senator Thorpe.

**Senator THORPE:** Thank you for appearing. The budget contained \$335.1 million over four years from 2023-24 as well as ongoing funding for the Mutitjulu community. This includes \$27.6 million over four years from 2023-24 to address critical infrastructure needs, including housing at Booderee, Kakadu and Uluru-Kata Tjuta national parks. Can you please outline how much of this funding is going to each of those national parks respectively?

**Ms Swirepik:** Thank you for the question. If you're looking for a breakdown of the \$27.6 million specifically amongst the parks, I would have to take that on notice. There are a range of infrastructure projects plus ranger housing and other operationally based money that will go to each of those national parks. So the cuts would be different depending on whether you're just looking at that capital funding in the envelope that you have identified or the broader budget measure.

**Senator THORPE:** Well, it's a breakdown of the \$27.6 million over four years, so I'm happy for you to take that on notice. Additionally to that, could you please outline which critical infrastructure needs the funding will address?

**Ms Swirepik:** The majority of those will be around staff housing and also some repairs to a number of different properties across the parks estate, as well as things like camping grounds, not just in the three jointly owned parks but also over at Christmas Island. We would have to get you a more extensive list because I don't have it listed in the way that you're asking the question, sorry. I can try and gather it from the information. I think my colleague is doing that as we're waiting. It's really about that capital investment—is that the question—within the \$27.6 million category?

**Senator THORPE:** It's about infrastructure. How much of the funding exactly is allocated to housing?

**Ms Swirepik:** Again, I would have to take that on notice. The \$26 million that you have identified is across refurbishment of the Warradjan cultural centre within Kakadu, improving campgrounds, upgrades to ranger stations and roads. I don't have the exact housing number with me. If you give us a few minutes, we can probably break it down more or less by park. But I don't have the housing number specifically drawn out in my papers, so I would have to take that on notice.

**Senator THORPE:** Thank you. Do you know what type of housing this is for? Is it solely for community housing or does it also include housing for tourists et cetera?

**Ms Swirepik:** This is our staff housing. To have staff working on-park, these are remote locations, so we provide the facilities for staff to live on-park. At the moment we do not have sufficient housing to sustain our staff

at an appropriate standard—in fact, it's a fairly significant attraction and retention problem for Parks Australia to be able to give our staff appropriate accommodation. All of the ranger housing is either housing that rangers live in or there are some upgrades to ranger stations, which is where visitors come to interact with the park staff in different parts of our national parks.

**Mr Mundy:** If I could elaborate, the largest proportion of the funding provided in the budget is to sustain parks operations, so the critical business of operating parks: the on-country activities like cultural protection, addressing ferals and weeds, so those on-ground activities. One of the key constraints to Parks Australia being able to deliver those activities has been the ability to retain and house staff in some of these remote locations, so the funding for housing in places like Uluru-Kata Tjuta and remote stations in Kakadu is very much targeted at helping us to address one of the key constraints to being able to deliver the business of managing parks.

**Senator THORPE:** My final question is: how are you working with the Mutitjulu community to deliver the funding package? You've talked about rangers. I think rangers are one thing, and we know rangers have got some funding over the last couple of budgets. But how else are you working with the Mutitjulu community?

**Ms Swirepik:** We liaise quite regularly with MCAC and the CEO and board members of that organisation, which is the Mutitjulu Community Aboriginal Corporation. They're responsible for representing Mutitjulu, and we have ways of going in with the Office of Township Leasing. The Executive Director of Township Leasing, which is another Commonwealth statutory entity, runs consultation meetings with the community, and we made ourselves available for the last meeting out there with the community. But the infrastructure needs there are a long-ongoing need, so this is not a new thing that has just become known and is being delivered in this budget. It's actually been a budget pressure for a number of years, with the number of projects growing around both provision of essential services, which is probably what you have seen is the headline for that \$92 million that has been provided by this government, and liaising with the community about desalinisation or demineralisation capacity to improve the quality of their water supply because it's incredibly poor. The salination actually means that a lot of that water is bad for people's health directly and for washing machines and air-conditioners and all sorts of things, which have very short life spans. Also, the sewage pods need to be de-sludged. We've been talking about a solar facility, which the board of MCAC have championed for a number of years.

This budget is a welcome relief in allowing us to be able to provide those services that don't meet contemporary standards. It has been a long, ongoing process. It has not been a recent project that has come onto our books. We are at about 60 per cent design capacity, and we will keep going back to the community to show them the designs for the infrastructure and get their feedback.

**Senator THORPE:** I have a follow-up question related to your answer. Besides just addressing some of the basic human rights like water and the other things that you have spoken about, could you outline what actions now are happening for the community at Mutitjulu—not just consultation; what are the actual deliverables that aren't basic human rights?

**Ms Swirepik:** I'm not sure if you're looking for me to go outside of the announcement that has been made on the very welcome budget by this government. We have made the fairly strong case that these are basic human rights—the provision of water, sewerage and electricity and being able to actually have a modern network of that within the Mutitjulu community.

We have been looking at trying to make sure that we can break out parts of the bigger project, because a number of housing developments have been waiting for a number of years in being able to be added to that network. We're looking at breaking out one of the projects that will allow the development of the houses that the Northern Territory government is providing. So there will be extra housing and extra capacity within the community to be able to comfortably house people—it's a basic human right, in my view—and lifting things to contemporary standards. Those projects always have flow-on effects for the health and vitality of any community. So that's where you get your extra benefits.

**Senator THORPE:** Thank you. I think my question was misinterpreted, but that's okay. I'm happy to put it on notice so that you can maybe gain a better understanding. My point on human rights is that it's a human right to have access to clean water. These communities have been deprived of that for a very long time. So that should be a given, rather than funding like this being used to just get us to the basic human rights standards. It would have been nice to hear of additional outcomes for the community rather than just their basic human rights are covered. That should be something that is a given. But I look forward to the next estimates to see how we have gone. Thank you.

**Ms Swirepik:** Thank you, Senator. I'm happy to take that on notice, though I would say that I agree with the basic human rights comment.



**Senator CADELL:** I have a general question on transmission lines. Is there any concern that National Parks have added to the degradation of national parks with the construction of those transmission lines with Snowy Hydro or other ones?

**Mr Mundy:** I'm happy to have a first stab at that. The Director of National Parks remit covers, on the mainland of Australia, three terrestrial jointly managed parks in Uluru-Kata Tjuta, in Kakadu and in Booderee. We don't manage the broader footprint of parks. So many of the places that you will have in mind in thinking about those services will be state questions.

**Senator CADELL:** Mr Mundy, when you were talking earlier you mentioned pests, boundaries, feral control and stuff like that. Once again, there is a very state focus on this too but, with the federal things, are you finding it is getting worse or better? The old phrase is you can't have good pest control if your neighbour does not have good pest control. Right across Australia there is general derision about how all managed national park with feral controls are sometimes seen as breeding grounds. How are you finding that?

**Ms Swirepik:** I might answer that one, thank you, Senator. I don't know that I would categorise it as getting worse or better. We certainly have fairly consistent issues around each of our national parks when we're thinking about feral animal control.

**Senator CADELL:** Yes.

**Ms Swirepik:** But then there's also control of other wildlife, or pests coming in from outside the boundaries of the parks. In fact—

**Senator CADELL:** Yes, I see—

**Ms Swirepik:** the invasive species or animals can disturb what we're trying to preserve in the parks, so it works in both directions. One of the really rewarding and fantastic things in the budget uplift that we've been able to get through this government is that we'll actually have a lot more money for feral animal and weed control in all of our big parks. That's one of the things that has been underfunded for a number of years and it's important to maintaining the World Heritage status, especially of those two big parks that my colleague referred to—Uluru-Kata Tjuta and Kakadu national parks.

Historically, we've struggled, really, to have sufficient funds every year to do enough feral animal and weed control, so it's fantastic that we'll actually be able to invest in those programs and now look forward over a number of years instead of wondering if we're going to get money next year—

**Senator CADELL:** Yes, because contemplating these—

**Ms Swirepik:** We do have issues that are very specific in the different parks, with all of our neighbours. We know them very well and there's a lot of interaction with them. Again, I wouldn't characterise it as getting worse or better: it's just a thing for national parks to deal with.

**Senator CADELL:** What are the most problematic animals? I've heard of feral camels: I wouldn't like it to come across one of those. Is that a thing, or—

**Ms Swirepik:** Yes. The whole time I've been out at Uluru-Kata Tjuta I haven't seen one, but there are plenty of buffalo, horses, donkeys and pigs through Kakadu, and of course a number of those animals in the other parks. The biggest issues among the island parks are things like feral cats and rats, which were recently affecting Norfolk Island. A whole lot of the issues around maintaining the unique botanical heritage on Norfolk Island are that the rats actually eat all the seeds and so we don't get the plants propagating. It just depends on which park you're in and which things happen to be the cohort of ferals that you're controlling. But the enhanced budget will provide us with a lot more certainty to be able to deal with that.

**Senator CADELL:** Thank you.

**CHAIR:** Senator Whish-Wilson.

**Senator WHISH-WILSON:** Quite a few of my questions have been answered; I wanted an update on the statutory review but I think you've already given that in some detail, so thank you. It's great to see 13,500 submissions from people who obviously care about the ocean and its management. Could you talk us through what the steps are from here? What's the process from here in, say, the next 12 months?

**Mr Mundy:** There are two processes that are running in parallel at the moment. They will come together over the months ahead. Those two processes are a public consultation process to proclaim a larger area of marine park around Macquarie Island. That's a statutory consultation—

**Senator WHISH-WILSON:** I might have asked this question at the last estimates, whether the expansion of the Macquarie marine reserve fitted under the current South-east Commonwealth Marine Reserves Management Plan?

**Mr Mundy:** Allow me to describe how the two processes intersect, Senator. The process to proclaim the new Macquarie Island Marine Park will close today—the public consultations for that one. Following that, the next steps are that the Director of National Parks will prepare a submission to the minister, summarising the outcomes of that consultation. Then the minister will make a decision to advise or not advise the Governor-General to proclaim the new area. Should the decision be made to proclaim that new area, then that area would be managed under the south-east Network Management Plan. That's the second statutory consultation—

**Senator WHISH-WILSON:** Which is also under review—

**Mr Mundy:** which is underway. To make a management plan, there are two stages of statutory consultation. The first one is called the 'notice of intent' stage, and that's the very broad, open consultation that's happening at the moment. It's without a draft proposition: it's simply a notification to people that the director intends to remake the plan and to provide inputs. Following that, we'll go away and prepare a draft management plan—a draft updated management plan which takes account of the feedback received through that process—and we then put that management plan out for 30 days of statutory consultation. Following that, it gets tabled in parliament and comes into effect following that process. The Macquarie Island Marine Park would be included in the management plan for the south-east, so they'd stream together in that second stage of the process.

**Senator WHISH-WILSON:** Presumably, that would be a disallowable instrument.

**Mr Mundy:** Correct. It's a disallowable instrument.

**Senator WHISH-WILSON:** That's the expansion of the Macquarie Island marine protected area, but the statutory review for the South-east Commonwealth Marine Reserves Network Management Plan, as you said, has been open for 60 days and closes tonight; is that correct?

**Mr Mundy:** Correct, yes.

**Senator WHISH-WILSON:** What's the process for that?

**Mr Mundy:** That's the process I described a moment ago. Following that, the Director of National Parks takes account of the comments received through the notice-of-intent consultation period.

**Senator WHISH-WILSON:** Okay. I'm getting a bit confused.

**Mr Mundy:** We draft an updated management plan. Following approval by the minister, that management plan is released for 30 days of statutory consultation.

**Senator WHISH-WILSON:** And what's the process after that?

**Mr Mundy:** After that, we take into account the feedback received through that second statutory consultation. The minister makes a decision on the final management plan, and it's tabled in the parliament for the disallowable period.

**Senator WHISH-WILSON:** And will the two come together as disallowable instruments at the same time, or is it possible that the extension to Macquarie Island will get done first?

**Mr Mundy:** They're two different processes. The process to proclaim Macquarie Island does not result in a disallowable legislative instrument; it results in a proclamation of the park. The park then has a management plan made for it, through the separate statutory process, and that management plan is a disallowable instrument.

**Senator WHISH-WILSON:** But, in terms of timing, when we get to the end of the process with the south-east network will the minister be able to say, for example, she's expanded the South-east Marine Parks Network with the inclusion of Macquarie Island or because of the inclusion of Macquarie Island?

**Mr Mundy:** Yes, if the Macquarie Island reserve were expanded in the manner proposed.

**Senator WHISH-WILSON:** I just had a quick question in relation to Senator Hughes's line of questioning regarding Austral Fisheries, a company I know quite well. In the existing area that's proposed to be expanded, what kind of fishing activity was occurring? How much displacement of fishing activity is there likely to be?

**Mr Mundy:** A number of the design considerations that were taken into account as part of the design that was released for statutory consultation were endeavouring to understand the existing footprint of the sustainable fisheries there and to avoid impact on existing sustainable fisheries. So the area of IUCN category IV yellow zoning, which would permit their existing activities to continue, is over an area somewhat larger than the area in which the companies in question have fished for the last 10 years. So, effectively, it captures the entire area that has been subject to active fishery in the last decade, plus a bit more.

**Senator WHISH-WILSON:** I know I've asked this question before, but I put a lot of questions to AFMA, and recently, through Rural and Regional Affairs, we had an inquiry into the spatial closures in the South East Trawl. That process has wound up now. Have there been any discussions under this process in terms of the review of the networks and the south-east closure? I know you've talked to AFMA before, and the fishing industry, but how have you coupled those two processes, if at all?

**Mr Mundy:** We've endeavoured to stay in very close contact with other stakeholders who have relevant interests in the south-east region that could be affected by the marine parks zoning. That, of course, includes AFMA as well as the various companies who've been involved in the south-east area that the Australian marine parks cover. As mentioned earlier, we've taken proactive steps to reach out to and engage with as many of those representative industry bodies as possible. We've been encouraging those bodies to provide submissions through the current public consultations process, because we really want to have a clear understanding of the industry dynamics at play at the moment to help inform decisions that are made around the next stage of marine park planning. So, at this point, we've been simply trying to acquire as much information from those companies as possible to help inform the next stage of design.

**Senator WHISH-WILSON:** It would be reasonable to assume that, when you get to the end of the process with the south-east networks, you'll look at the fact that, as I understand it, 12 per cent of the south-east trawl is going to be subject to spatial closures. For fisheries management purposes, it's obviously very different to designating areas as marine protected areas or marine parks. Would it be reasonable to assume that you'll take that into consideration, whether making or not making changes to the existing network?

**Mr Mundy:** One of the key themes from speaking to all of the participants, particularly from the fishing industry but from other sectors as well, has been that cumulative impacts from different activities occurring in the south-east region are becoming a very live issue and concern for them. I expect that the other factors at play, even if they're not occurring within a marine park, will be factors that we'll need to take into account when we come up with a final proposed management plan arrangement for the network, to ensure that we're achieving the right balance between protection and economic use of the areas.

**CHAIR:** I have to rotate the call.

**Senator WHISH-WILSON:** This will be my last question then. Obviously, I've got a lot more reading to do on the decisions for the spatial closures and why those areas were chosen. I know they were very targeted, at a couple of species of fish, but there have certainly been concerns raised that some of the broader overfishing in the south-east trawl area relates to the slopes and some of the deeper water areas that have been heavily trawled. If a large area was closed by AFMA and there were no other changes to the marine park, it wouldn't necessarily be a good environmental outcome. But I'll ask you more questions on that a bit later.

**CHAIR:** Senator Payman?

**Senator PAYMAN:** The significance of funding the national parks was previously highlighted. What does this immediate injection of around \$260 million and the ongoing fund mean for the future of national parks?

**Ms Swirepik :** The funding that we've been provided is very vital funding. As my colleague mentioned before, more than half of that, \$127 million, is for what we call operational funding, which is our day-to-day funding of parks activities. Our situation over the last 10 years is that we've had insufficient funding. In fact, we've had to call on reserve funds every year or come back to government every year to just do our basic activities. So this funding injection shores that up and gives us capacity, and not just in the four out years. The fact that it's ongoing funding means that we can now plan our programs properly to protect both environmental and cultural values in our parks.

**Senator PAYMAN:** Can you elaborate on that underinvestment you mentioned as it relates to your operational capabilities within the parks?

**Ms Swirepik :** We've basically had insufficient funds to do our activities, so most years we've been juggling things like work health and safety on park and staffing numbers—whether we can afford seasonal rangers or are able to offer a ranger guided activity. We have a labour hire scheme, the INI scheme, which brings a lot of people, especially in the Indigenous communities, to work on park, on country, and be paid for that. In most years that's been very stop-start, as have things like weed and feral animal control, because we've had insufficient funds and we've had to just see what we've got every year.

This funding will allow us to actually deliver all those activities in a much more consistent way across parks and have a much stronger foundation to protect the World Heritage status of the two big parks. It will also allow us to continue cat eradication at Christmas Island or to manage threatened species at Uluru, or those programs where we go out and do a flora survey with all of the local people working on country. This is the money that will

sustain all those fantastic activities that make the park a proud place that is sustainable and not something where we're really inching by, year by year.

**Senator PAYMAN:** Speaking of sustainability, how does the investment work toward a broader whole-of-government objective such as Closing the Gap?

**Ms Swirepik :** In three of the big parks a great deal of the funding might go into a majority traditional owner community. So there'll be a lot of benefits both within the local community and in the visitor economy around money that comes into those regions. Some research that is being done across other parks shows that for every dollar spent on park management about \$10 goes into the local community, and that for every dollar spent by a visitor about \$26 actually goes into the regional economy. There are those sorts of knock-on benefits: you get both a better park and a better community.

With regard to Closing the Gap issues, at those Commonwealth parks over 30 per cent of our staff are Indigenous Australians, which is a very high percentage, across the Public Service. It provides jobs to work on country. All those programs that I referred to before, like doing the flora and fauna survey with the park rangers, provide that opportunity to work on country. To me, it's actually one of the closest connections, in fact, of allowing people to work on their own country and get paid for it.

**Senator PAYMAN:** Finally, what would the downstream benefits of this funding be towards tourism and other economic activities?

**Ms Swirepik:** I've talked about the operational funding, but there's also \$70 million for asset renewal. To be able to maintain camping grounds, walking trails, shade structures and things like that for visitor safety and visitor enjoyment means that the parks will be better places to visit. We'll be able to maintain them in the iconic status that they deserve, so there's a lot of that flow-on effect through to the visitor economy.

**Senator HUGHES:** Could I come back to where we were. With regard to modelling, has any part of government undertaken any modelling or commissioned what the impact of tripling the marine park would be on employment and tourism? And is there anything else that the modelling showed?

**Mr Mundy:** Are you interested principally in Macquarie Island here?

**Senator HUGHES:** Yes.

**Mr Mundy:** There is no formal econometric modelling around the proposed zoning; however, the basis for the zoning was endeavouring to reduce, to the degree possible, the level of impact on existing economic activities while promoting the ecosystem benefits that can come from having protected areas. Presently there's only one form of extractive economic activity around Macquarie Island, and that's the highly sustainable, high-quality toothfish fishery that's being conducted in that area by Australian Longline and Austral Fisheries. Of course, when we were looking to understand the potential for economic impact of the park, we started with speaking to those companies about their existing footprint and areas of activity. The first proposed zoning for the park, as mentioned earlier in response to Senator Whish-Wilson's question, creates a zoning which will not exclude any of the existing fishing activity around the island, and so, prima facie, our understanding is that the likelihood of an economic impact from the proposed zoning is quite low.

On the opposite side—and to talk about the broader purpose for the creation and management of parks—typically our parks have two objectives in the way their management plans are written. They are: to protect and conserve biodiversity and to encourage sustainable economic activity to the degree consistent with that. The proposed zoning that's been put out achieves that first and primary goal to quite a high degree. It endeavours to protect the biodiversity of a unique subantarctic location that's got such a vast range of ecosystem benefits, which are subject to potential pressures from climate change and other activities that may not look feasible now but may in the future. The act of proposing to create a marine park over those locations will help to preserve some of those key unique features from a very unique part of Australia into the future in a way that, ideally, will have limited to no economic impact on the fishing companies and potentially some upsides for the very small tourism industry which currently visits Macquarie Island.

**Senator HUGHES:** Have you heard of Pew Charitable Trusts?

**Mr Mundy:** Yes.

**Senator HUGHES:** What has been their input into this?

**Mr Mundy:** Pew Charitable Trusts are one of the many stakeholders who I listed earlier as being interested and active around the proposal to expand Macquarie Island. They've been one of the stakeholders, together with that long list of others, with whom we've engaged in trying to understand the benefits and some of the options for creating the marine park. You're probably also aware, Senator, that Pew Charitable Trusts commissioned a

scientific research piece into the ecosystem around the island, which was publicised some weeks ago and released for stakeholders to see and to be used as an input to the process to create the park and an associated management plan.

**Senator HUGHES:** What sort of weight would the submission and this so-called scientific research by Pew Charitable Trusts have in the decision, versus the current science around the sustainability of that fishing area?

**Mr Mundy:** There's not a score based weighting system that we use, like an algorithm or something, that produces an output. But what does have weight, typically, in these processes is well based, empirical information and research that helps us to build a clearer understanding of what the values of the place are and how best they might be protected. The report in question was prepared by four eminent subantarctic researchers whose experience in the field is quite considerable, so it's a useful input, but, again, we'll be keen to get all of the useful inputs that we can from all of the sectors through the consultation process and endeavour to come to a balanced arrangement about the optimal zoning and management arrangements for the island's waters going forward.

**Senator HUGHES:** Do you stand by the belief that there has been significant consultation by the department and this government with the commercial fishing companies that will be financially impacted, Austral and Longline?

**Mr Mundy:** Certainly—yes.

**Senator HUGHES:** And they, according to you, haven't necessarily objected. Is that correct?

**Mr Mundy:** No, I'm not at all saying they haven't objected.

**Senator HUGHES:** Okay. You seemed to indicate that they were all onboard and were happy campers.

**Mr Mundy:** Of course there's a diversity of views around the optimal zoning for the marine parks, and I'm sure they will express their views through their submission to the process, as they have in informal consultations prior to it. But I should say that, to actually undertake the process to proclaim a new park one, needs a proposition to put to the public. We can't just put a blank piece of paper out to engage people. The act requires us to have a proclamation proposal. In this instance, we adopted the practice that we have in the past—including, for example, when we created the Indian Ocean Territories Marine Parks a couple of years ago—which is to identify the key stakeholders who have an interest in the location and to try conduct some preliminary discussions with them to better frame the initial proposal that we put to the public.

**CHAIR:** Senator Hughes, are you tabling this document?

**Senator HUGHES:** I am. I'm about to refer to this.

**Ms Swirepik:** Before we move on, can I just add that part of what we do with every park management plan that we write, whether it's terrestrial or marine, is to kick that off with a process of independent evaluation of the last plan. That's been done as a primary activity. It was released at the same time that the consultation period was opened to the public. That's something that everyone can refer to, to see how well the last plan went. With that, there are all the submissions that have come in through not just that just one stage that has been open now, and displaying the plan itself is important to putting that proposition and direction on the table. It's then been based on the evidence that we've collected through the independent evaluation and all the preliminary submissions that we have.

**Senator HUGHES:** Are those submissions publicly available? They close tonight.

**Mr Mundy:** When the process has been closed, after that, as soon as we're able, we'll be making those submissions available online.

**Senator HUGHES:** You said there have been about 14½ thousand.

**Mr Mundy:** Correct.

**Senator HUGHES:** Have they at all been looked to see whether there are a significant number of form submissions or whether they're independent submissions?

**Mr Mundy:** My initial read is that the vast majority of those submissions are campaign submissions, so there will be a limited number of unique submissions. We won't post each campaign submission individually.

**Senator HUGHES:** No. That's why I'm just asking. With 14½ thousand, I'm pretty sure you'd have a few campaign ones. Where will the non-campaign ones be available when they are published?

**Mr Mundy:** We'll put them on the Parks Australia website. It might not be immediate after the consultation closes, but we'll be endeavouring to make them publicly available as soon as practicable.

**Ms Swirepik:** One of the things I was getting to before about what that process looks like from the beginning of actually doing an independent evaluation is that it is important not to pre-empt the end outcome of the minister

or, in fact, the way that we're presenting and writing into a draft management plan. So, while the questions here are exploring the territory of what the stakeholders think, we can't assume what the end outcome might be on behalf of the minister.

**Senator HUGHES:** I'm more concerned about the process used, how it has been conducted, who is conducting it and who has been weighted more heavily in its views than others. We've now heard that Austral and Longline, amongst other groups, were consulted and have been part of the conversation. What I've just tabled is a press release they put out on 23 February. This does not sound like groups that have been consulted. They have said:

The redesign of the park represents a serious overreach by the Minister that will send shockwaves through the Australian communities and regions who rely on marine estates for employment, tourism and recreation.

This is nothing more than a green-washed PR stunt designed to garner the support of the Greens and teal-independents ...

That doesn't sound like someone who feels that they've been consulted and listened to. Do you agree?

**Mr Mundy:** These are the views that industry have put forward on the basis of a version of a draft consultation document that was put out to the public. Of course, they have the opportunity to provide that input formally through the public consultation process which is underway at the moment, and, of course, it'll be considered together with the other inputs received from other sectors. But I can assure you, Senator, that we've endeavoured to engage with these companies. We've had multiple meetings with them. Aspects of their preferences have been incorporated into the version of the proclamation proposal that was put out to the public. The northern boundary of the area which has been retained for fishing, for example, reflects our endeavours to try to match the existing footprint of the fishery and achieve those multiple objectives of environmental protection while encouraging and enabling sustainable economic activity.

**CHAIR:** We'll rotate the call, if that's alright.

**Senator HUGHES:** Alright, that's fine.

**Senator McAllister:** Chair, if I may: I indicated to you, Senator Hughes, that we'd take on notice information about the minister's interactions with a range of different entities and the timing of those. I don't have all of that information, but I can confirm that the minister met with the two companies that operate in the Macquarie Island Toothfish Fishery, as has the minister for agriculture, Minister Watt.

**Senator HUGHES:** So both have met with them once. Is that right?

**Senator McAllister:** I don't have an indication about the number of occasions, but they have met with them. And, as I said, I'll take on notice the balance of your question and seek further information.

**Senator HUGHES:** Thank you.

**CHAIR:** We'll go to Senator Cox.

**Senator COX:** I particularly want to ask some questions about the budget measure on protecting Australia's iconic national parks. I just want you to walk me through the figures that were quoted in the media release by the minister on 26 April, because they're two different amounts. There was an additional amount of \$262.3 million in the budget, and it's different from the figure of the \$355.1 million. Can you walk me through those two figures and tell me why they're different?

**Ms Swirepik:** The difference exactly between them is the measure to provide essential services to Mutitjulu. The \$360 million includes that. The \$262 million is for Parks Australia, for operational needs—that was the \$128 million that I referred to before—\$70 million—

**Senator COX:** Sorry, that's the \$127.8 million?

**Ms Swirepik:** Yes, that's \$127.8 million in operational needs. The \$92.8 million is the Mutitjulu measure for essential water, sewage and electrical services. The \$70 million is for asset sustainment. I was talking before about that regularised program to be able to maintain campgrounds, water supplies and stuff like that. There is also the \$27.6 million for critical asset needs, which I think Senator Thorpe referred to. There's \$25.9 million for visitor and tourism infrastructure at Kakadu National Park and about \$10 million for the upgrade of communication needs across the parks.

**Senator COX:** The media release also mentions Kakadu. What is the breakdown specifically, and will the funding for Kakadu come out of that bucket of money?

**Ms Swirepik:** There is obviously previous funding also for Kakadu, but the new funding in here will go towards the Warradjan Aboriginal Cultural Centre, the upgrade of some of the roads in the park and the ranger station. We have been able to do some of the ranger stations with previous funding but we focused on the Mary

River ranger station in East Alligator. This provides money for South Alligator ranger station and Jim Jim ranger station. Then there are things like campgrounds and signage across the park that we will be able to refresh.

**Senator COX:** I notice that that was mentioned in the media release. Thank you for walking me through that. I appreciate that.

**CHAIR:** Thank you for coming in and joining us. We will now release you and call the officers of the Australian Energy Regulator to the table.

### Australian Energy Regulator

[17:41]

**CHAIR:** Welcome, Ms Savage. It is good to see you. Do you wish to make an opening statement?

**Ms Savage:** No, thank you. I think we will move to go straight in. I gave my opening statement last time.

**CHAIR:** We will take that as read. Senator Van will go first.

**Senator VAN:** Thank you for appearing, Ms Savage. It is good to see you. I would like to start off with an article from the *Herald Sun* of 18 April. I will take that article on face value and put it to you. It talks about people being forced to electrify their homes under the Victorian government scheme and, having electrified their homes, having to disconnect from gas and then being receiving a charge of, I think, \$958. The headlines says \$1,000 but I will go with that number. I think I've got that right. The article says that the price disconnection because charge is set by AER. What can you tell us about that?

**Ms Savage:** Thank you for the question, Senator. Under the gas distribution system, there are a range of what we call haulage services. They are the types of services that are recovered from all customers. Then there are reference services or ancillary services. They would be the types of things that are basically on a user pays type arrangement. When we do our five-year revenue determination for the gas distribution businesses, those businesses come to us and say, 'Here are the costs that we think need to be in the haulage services, here are the things that will be separately chargeable and here are the cost of those.'

In the case of the Victorian businesses—and there are three of them in Victoria—one of the services that they offer is a temporary disconnection from the gas network. The other service they offer is a metre abolishment basically. A temporary disconnection is about \$65 to \$85, I think, depending on the network. The permanent abolishment is different for each network but it's around the \$800, \$900 or \$1,000 mark. We've looked at the costs of abolishing. To abolish the meter you have to take the gas meter out, bring the pump network back to the street and cap it at the street. We think those costs are about that much. The challenge that we've seen, and I think it's referred to in that article, is who should pay for that cost? Should it be the individual who's disconnecting from the gas system or should that be a cost that's socialised across all gas users? We're currently looking at making that determination for those businesses for the next five years. I think we'll have that decision out on 5 June.

**Senator VAN:** As a draft or final?

**Ms Savage:** Final. In our draft decision we asked that question. We remained open as to whether it should be an individually charged price or whether it should be something that's socialised across all customers. The safety regulator in Victoria has said that if you are disconnecting from the gas system. and it's not a temporary disconnection, then you should be making safe, which would be to remove the gas infrastructure back to the street. The reason for that is if the meter is gone or not visible, and you've sold your house, for example, someone could come and dig and it's a live gas asset and you could have an explosion. We've had to take into consideration the safety considerations and the incentives that are created for people who are disconnecting if there's such a big difference between temporary disconnection and permanent disconnection. We're addressing all of those issues in our final decision.

**Senator VAN:** Part of that, I'm assuming—

**CHAIR:** Can I just interrupt you? Are you tabling this document, Senator Van?

**Senator VAN:** I tabled it, yes. I'm well aware of the issues on safety et cetera, but if we're trying to encourage people to electrify their homes—some people will argue it's a good thing and some people won't—but regardless, if that's what we're trying to incentivise people to do, to then leave them with a thousand dollar bill to do so. That article mentions \$958, but if your meter is further away from the street you're digging up the road to do that and you're going to look at even higher costs.

**Ms Savage:** It's a fixed charge, actually. Without prereleasing our final decision, we have considered these issues. But it's not our job as the independent regulator to make a view on whether people should electrify their homes or not, but we've certainly looked at the question of who should pay for gas abolishment and particularly because of the safety issues that are created if there's a big difference between a temporary and a permanent

abolition. We wouldn't want to, as the economic regulator, create an economic incentive for people to choose temporary disconnection when actually they're permanently disconnecting.

**Senator VAN:** Or not disconnect at all, and keep the gas stove et cetera. I'm not sure if you were in the room earlier when I was putting questions to Mr Duggan about the cost of transmission. If you were, great, it might save me a little bit of time.

**Ms Savage:** No, I wasn't, sorry.

**Senator VAN:** I was putting questions to Mr Duggan earlier about transmission and the enormous cost with the projection of the increase in transmission that's been planned for Australia—for the NEM, I should say. There's very little being planned for Western Australia. The cost of that is going to be borne, at the end of the day, by either taxpayers or energy users, and if not energy users themselves, the consumers of the products that energy users use. Have you done any modelling of your own to assess AEMO's transmission costings?

**Ms Savage:** We don't have a role in that part of the system. What we do is set up the cost benefit guidelines that AEMO needs to use when it does its integrated system plan. We effectively say the things that they can consider in terms of benefits and the costs and the standard about which they have to look at the different costs, but it is AEMO's responsibility to do that modelling. They do the modelling of what is called the least-cost development pathway or the optimal development pathway. That is their responsibility. We then have the role of assessing the most efficient and prudent project once that project comes through the process, but we don't have a role in assessing AEMO's modelling.

**Senator VAN:** That's a very good point, so who oversees AEMO's costings?

**Ms Savage:** There are quite a few. They do what's called an inputs assumptions and scenarios report, which is the first step in their process. They have a consumer reference group for that, but also we do a transparency review. What we do at that point is we go through and basically ensure that they've used publicly available information and credible sources, so that all of the inputs and assumptions and scenarios are valid. We also do that at the draft report stage. But it's not opining on whether they've made the right choices; it's ensuring that they've followed the right process—that the right process has been followed so you can rely on the modelling that has been done.

**Senator VAN:** Then, when you come to the cost-benefit analysis, what are you weighing up? The costs are fairly obvious; they're enormous. What are you weighing up as the benefits?

**Ms Savage:** We're not weighing it up. That's what AEMO's doing. What we're doing is establishing the rules about what they would weigh up. If you are thinking about benefits—

**Senator VAN:** But that's even more important. I'll shoot the question home to you: when you're putting forward what AEMO is allowed to count as a benefit, what are you putting forward?

**Ms Savage:** We can make that available to you. It's a publicly available document. Regarding the types of benefits, they have to be market benefits and they have to be within the electricity system. So they can't consider, for example, jobs in south-west Victoria. That's not a benefit that is within the electricity system. They would be looking at the various different options under localised generation versus transmission across country versus batteries at the border. They weigh up all these different types of options in their report or in their modelling. The sorts of benefits that we allow them to consider would be the net effect on electricity prices, for example, because that is a benefit. You will be looking at whether prices will be higher or lower under these different development pathways. They are the types of benefits they would be considering.

**Senator VAN:** It strikes me that the ISP, and I don't think I need to table that for those here—

**Ms Savage:** I'm well familiar with it, Senator!

**Senator VAN:** We both are! It seems to me then that AEMO sees every problem as a nail, and it sees itself as a hammer. Because the only thing they put forward, in reality, is more transmission. Whereas scientific communities around the country and around the world would argue that there are far better solutions to electrify and decarbonise than more transmission. Certainly, if you take into account social licence to operate and the pushback, delay, cost and aggravation—if you take all those costs into what they are putting forward, they are hitting an awful lot of nails and not necessarily building a grid that is going to be stronger because there is more DC voltage going in, and they are not solving for those problems. They are literally just solving for more VRE in the system, which isn't going to actually solve the problems.

**Ms Savage:** I'm not sure that your characterisation of how the ISP is undertaken is consistent with my understanding. What they actually do is look at the range of generation that is required to meet demand, and then they are looking at the least-cost way of doing that. So they will be looking at a combination of transmission and



generation investments that solves for the least-cost pathway. It is not just transmission in the ISP; there are renewable energy zones, there are assumptions about how much distributed energy resources there are. And it differs by scenario, as you said.

**Senator VAN:** Yes, obviously.

**Ms Savage:** So what they're solving for is, across each of those scenarios, what is the least-cost pathway? They take as a given our climate goals, and, in solving and meeting demand in a context of those climate goals, they are looking at that combination of both generation and transmission investments that delivers the least-cost system.

**Senator VAN:** That's not my reading of it. If you read other credible sources, whether it be Net Zero Australia or Climateworks, their scenario planning tends to have a far different view of it than AEMO's. Even those that look at AEMO and use their scenarios come up with far different solutions. Again, the hammer and nail analogy is a real one.

**Ms Savage:** As I said, it is not consistent with my understanding of the ISP.

**CHAIR:** We'll move on to Senator Roberts.

**Senator ROBERTS:** Thank you all for being here today. The national electricity objectives include price, quality, safety, reliability and security of supply. The government is now intending to add emissions reduction to those objectives. You, the Australian Energy Regulator, made a submission to the government's consultation process on the draft National Energy Laws Amendment (Emissions Reduction Objectives) Bill 2022. In that submission you said, 'The AER supports including an emissions reduction objective.' This is support for a proposed government policy. Surely the very first value of the Australian Public Service is meant to be impartiality. Why are you commenting one way or another on support for a government policy?

**Ms Savage:** I guess my objective from that would be that we are there to try and meet Australia's emission reduction targets in the least-cost way. That's part of our job, and our decision-making needs to ensure that happens. Our purpose as the Australian Energy Regulator is to ensure Australian consumers are better off now and in the future, so when we assess what tools we need, as the Australian Energy Regulator, to actually do our job effectively and to make sure that we can deliver upon that purpose, our considered view is that change to the legislation, to the objective for which we have to use our decision-making, is required and is important to us being able to deliver upon our purpose. So it speaks fundamentally to our role rather than to the government's policy.

**Senator ROBERTS:** Do you consider that the Australian Public Service Values and Code of Conduct apply to you?

**Ms Savage:** I absolutely do, Senator.

**Senator ROBERTS:** Do you consider that the Australian Public Service value of impartiality applies to you?

**Ms Savage:** Yes, I do.

**Senator ROBERTS:** Why are you stating support for a proposed government policy, rather than impartially commenting on your ability to carry it out?

**Ms Savage:** I'm not commenting on the policy; I'm commenting on the importance of the change to the work of the Australian Energy Regulator. In that regard, my obligation is to make sure that we have the tools we need to discharge our function such that we can ensure Australian consumers are better off now and in the future.

**Senator ROBERTS:** I put it to you that you are breaching the Australian Public Service value of impartiality by advocating support for a government policy. I would like you to take on notice to fully explain how advocating support for government policy in a submission is impartial.

**Ms Savage:** Senator, as I've said, we didn't advocate support for the policy. We're advocating support for the changes to the laws that are required to enable us to do our function.

**Senator ROBERTS:** 'The Australian Energy Regulator'—your words—'supports including an emissions reduction objective.'

**Ms Savage:** That is the change to the legislation required to do our function.

**Senator ROBERTS:** You've taken a side in this debate even before it's started. You're required to be impartial. Why were you not impartial?

**Ms Savage:** I have—

**Senator ROBERTS:** I don't accept your answer.

**Ms Savage:** I hear that you don't accept my answer, but my answer remains that we have asked for changes, and we constantly and repeatedly ask for changes to legislation—and it's in our strategic plan to do this—when it's required for us to fulfil our strategic purpose, and that is to ensure that energy consumers are better off now and in the future. Limb 4 of our strategic plan actually says we will inform debate about Australia's transition, and that's to ensure that we can do our job to make sure Australian consumers are better off now and in the future.

**Senator ROBERTS:** I suggest you read the Australian Public Service Values and Code of Conduct.

**Ms Savage:** I have, Senator.

**Senator ROBERTS:** The current objectives of price, quality, safety, reliability and security are sound objectives. What level of compromise on price or reliability are you willing to accept to achieve the objective of emissions reduction?

**Ms Savage:** When it comes time for us to consider the new objectives, with all of the limbs in them, including the emissions reduction objective, we'll need to think about the value of carbon emissions reductions in the context of the target to achieve net zero by 2050, to ensure that the investments that happen in things like transmission or gas networks are consistent with achieving that goal at least cost to consumers, which is where that element of making sure consumers are better off now and in the future arises.

**Senator ROBERTS:** So my question—I'll say it again—is: what level of compromise on price or reliability are you willing to accept to achieve the objective of emissions reduction? You've now got a new objective.

**Ms Savage:** I don't see it as compromise; I see it as optimising.

**Senator ROBERTS:** Can I take note of that?

**Ms Savage:** Absolutely.

**Senator ROBERTS:** It will be interesting in the future. What are you going to do if the objective of emissions reduction conflicts with those existing objectives?

**Ms Savage:** We will need to optimise against the current list of objectives, and the inclusion of emissions reduction which become another limb. Already, today, we have to make judgements and choices between the existing elements of those objectives. We constantly have to be thinking about trade-offs on behalf of customers in terms of price, quality, safety and reliability, and we will also be considering emissions reduction in that context.

**Senator ROBERTS:** I put it to you that there is no way that the objectives of price, reliability and emissions reduction can be achieved at the same time, so which one will you prioritise?

**CHAIR:** Senator Roberts, I wonder if your questions are getting a bit accusatory. You have asked questions, and Ms Savage is responding to your questions with her perspective.

**Senator ROBERTS:** I have constituents that are deeply concerned about electricity prices that have trebled in a couple of decades.

**CHAIR:** You are open to ask your questions, but I would ask you to mind your manner.

**Senator ROBERTS:** Thank you, Chair. I say it again: I put it to you that there is no way the objective of price reliability and emissions reduction can be achieved at the same time—the facts show that—so which one will you prioritise? You've actually supported the government and its policy, so which one will you prioritise?

**Ms Savage:** An example might help. Currently, we have to think about price, safety, security, reliability. When we make a judgement, we have to think about price and reliability, and those two things aren't always the same thing. More reliability can mean higher prices, and higher prices can mean lower reliability. On safety and security, we just gave, in response to Senator Van's question, an example of abolishing gas connections; there is a safety issue there. We're always and constantly in our work needing to optimise across those different objectives within the national electricity and gas objectives, and, with the inclusion of emissions, it will be the same type of task. We have to look at it in its whole, and we have to optimise across all of those objectives. We do it today and will be able to do it tomorrow.

**Senator ROBERTS:** My view is that the people who tell us wind and solar are the cheapest form of electricity are lying. If they are the cheapest form of electricity, why do we need to change the electricity objectives to include emissions reductions, so they are favoured?

**Ms Savage:** You are thinking about generation technologies. We do a lot of work with the Australian Energy Regulator in electricity and gas networks, and that's nothing to do with renewable energy necessarily. If I take a gas network, for example, and if you came to me as a gas company and said, 'I need to invest in an electric compressor instead of a gas compressor because I'm trying to meet my emissions reduction objective,' then that is

something that we could not consider necessarily under the existing obligations. Under a future set of arrangements that's something we could consider, so it's not necessarily about wind and solar; it's about lots of little choices that go along in the system to make sure it all adds up to the least-cost way of meeting our climate goals.

**Senator ROBERTS:** If the ministers past and present are not lying and solar and wind are cheap and reliable, it would fit into existing objectives of price and reliability. Why do we need to change the objectives if the climate ministers are not lying?

**Ms Savage:** As I just said—and I'll repeat my answer—it's not always about wind and solar. Sometimes it will be about networks, and, in fact, most of the changes to the objective for the work of the Australian Energy Regulator will be about transmission, distribution, electricity and gas networks.

**Senator ROBERTS:** So it won't be about price versus emissions, yet everywhere in the world every country that has a substantial proportion of solar and wind has had a dramatic increase in prices—that's fact.

**Ms Savage:** Are you asking me a question?

**Senator ROBERTS:** Yes, I'm asking you a question. How can you justify the statement that there won't be a trade-off between emissions and price?

**Ms Savage:** I have covered that in answering the question before, which is that we'll be optimising across the new emissions reduction objective with the other elements of the national electricity and gas objectives.

**Senator ROBERTS:** What is the Australian Energy Regulator's position on nuclear energy?

**Ms Savage:** We don't have a position on nuclear energy.

**Senator ROBERTS:** So now you're impartial?

**Ms Savage:** We're always impartial.

**CHAIR:** Last question, Senator Roberts.

**Senator ROBERTS:** You say as part of your retail energy market regulation, your other roles include, secondly, reporting on performance of the market and energy businesses, including affordability and disconnection of customers for non-payment of energy bills. What is the latest disconnection rate in each state? Could you take that on notice?

**Ms Savage:** I can tell you at the macro level and take the state based data on notice. For '21-22, which is the last full financial year of data we have, the number of disconnections was about 30,000, which is significantly less than what we saw before COVID. At the time before COVID it was 70,000 customers per year.

**Senator ROBERTS:** Could you take on notice to give us the five years—actually the three years?

**Ms Savage:** I have the five years here at the macro level if you'd like it.

**Senator ROBERTS:** I would like to know the states as well because I want to see how the different states are behaving.

**Ms Savage:** Actually, I have got the states here. Would you like me to read them out?

**Senator ROBERTS:** If you could put it in writing, that would be good.

**Senator McAllister:** As you can imagine, it ends up being like 20 numbers.

**CHAIR:** I wonder if we could just copy it in the break and circulate it—just for ease. Is that okay with you, Senator Roberts?

**Senator ROBERTS:** That's fine.

**Ms Savage:** At a cumulative total, in 2017-18 it was 72,000 and in 2018-19 it was 70,000. The Australian Energy Regulator then asked retailers to stop disconnecting customers during COVID and we saw a big drop down: 43,000 in 2019-20; 17,000 and 2020-21; and then it's back at 29,000 in 2021-22.

**Senator ROBERTS:** Thank you.

**Senator RENNICK:** Who is responsible for cleaning up windfarms and solar farms at the end of their life—the farmer or the renewable energy company? Is there a set of rules and regulations around that or is it an ad hoc thing based on the contract?

**Ms Savage:** I don't actually know the answer to the question. It is not the Australian Energy Regulator's job—I can tell you that.

**CHAIR:** Tomorrow morning might be a better bet.

**Senator RENNICK:** So who are we speaking with here, exactly?

**Ms Savage:** I am the chair of the Australian Energy Regulator.

**Senator RENNICK:** I know you spoke about CostGen. Can I ask any questions about that?

**Mr Duggan:** About the costings?

**Senator RENNICK:** Yes.

**Ms Savage:** What was it about.

**Senator RENNICK:** You quoted CostGen as to why renewables are cheaper. But they also rely on a 40 per cent capacity factor for windfarms when, in actual fact, the capacity for windfarms in 2018 was 28.2 per cent, in 2019 it was 27.7 per cent and in 2020 it was 27.1 per cent. So they are effectively overestimating the capacity of windfarms by 50 per cent. Do you have anything to say about that?

**Ms Savage:** There are different ways that you can measure the cost of generation. There's the levelised cost of generation, which takes account of capacity factors. The International Energy Agency has some really good data on that and so does the CSIRO. The other thing you can look at is what is called burnt renewables. So you can look at wind or solar cost or you can look at a firm cost, which would include the cost of pairing it either with gas-fired generation client, with a battery or with a pumped hydro facility, and you will get different prices based on all of those.

I tend to prefer to use numbers that look like a firm renewable number, because it's easier to compare apples with apples. When you are looking at a firm renewables number, it's still cheaper than conventional technologies like coal or—

**Senator RENNICK:** But that's using this assumption of 40 per cent capacity—

**Ms Savage:** That's right.

**Senator RENNICK:** when in actual fact it is between about 28 per cent and—

**Ms Savage:** But it will be paired at some point with a gas-fired peaker; so you are looking at an apples by apples basis.

**Senator RENNICK:** Yes, but the assumption is wrong.

**Ms Savage:** Sorry, Senator; I will just clarify what I'm saying. When you look at a firm renewables number, which is different to just a renewables number, you would be looking at both the cost of the windfarm, for example at a 40 per cent capacity factor, and the cost of having available generation from a gas-fired generator, which would be available whenever you need it. So the balance of the 60 per cent—

**Senator RENNICK:** Yes, I know what that is.

**Ms Savage:** Then you would look at that price in aggregate. When you look at those prices in aggregate, they are the cheapest form of generation technology.

**Senator RENNICK:** To produce or to sell?

**Ms Savage:** Can you explain the difference to me?

**Senator RENNICK:** Well, for example, what happens is you will often see renewable energy sold very cheaply in the middle of the day because there is an oversupply of solar energy and then at night-time the coal-powered fire stations are turned back on and they are charging at a much higher cost than the cost of production to recoup the losses made during the day. So there is a difference. The cost of the coal isn't actually that expensive but it is priced much dearer because they are recouping the losses made from renewables during the day. Is that ever taken into account?

**Ms Savage:** When I was talking about that firm renewable number, that is about the cost of producing power at any time of the day or night.

**Senator RENNICK:** So that is taken into account. How do you take that into account?

**Ms Savage:** By assuming that the renewable plant can be there when it's available—so the 40 per cent of the time.

**Senator RENNICK:** But, as I just said, it is only 27 per cent of the time.

**Ms Savage:** It would depend on the location of the generation facility.

**Senator RENNICK:** That is the average across Australia.

**Ms Savage:** Sorry; but I think it is higher than that—the average capacity factor for windfarms.

**Senator RENNICK:** Not according to the official numbers—no, it is not.

**Ms Savage:** What are those official numbers, Senator?

**Senator RENNICK:** That's the actual capacity for the windfarm fleet for 2018-19 and 2020. It was 28.2 per cent.

**Ms Savage:** I was after the source.

**Senator RENNICK:** That is from the AEMO website.

**Ms Savage:** Okay. If that is the average number—

**Senator RENNICK:** Yes.

**Ms Savage:** If you are doing a new project, a new project would not be the average number; the new project would be the incremental, because that could include very old projects with much smaller turbines. If you look at the much newer projects, you would be looking at a three megawatt per turbine wind farm; whereas, in the old days, they were one megawatt per turbine. So you tend to get very different capacity factors through time.

**Senator RENNICK:** But wind is wind, though. Whether it is a one-megawatt or a three-megawatt, the wind is only going to blow 28 per cent of the time, by the looks of it.

**Ms Savage:** But the length of the turbine blade matters, so, if you have a longer turbine blade, which is why you get a three-megawatt turbine as opposed to a one-megawatt turbine, the capacity factor increases. My point is: if you are looking at a new investment, you'd be looking at the capacity factor of a marginal new investment, the next investment into the system, and it wouldn't have the capacity factor that's the same as the average; it would have a capacity factor equivalent to a new turbine being built.

**Senator RENNICK:** That's good to know. There was an article from Bloomberg about these bigger wind turbines that are breaking down more often. I was just up in North Queensland and—I'm not sure if this is your area, because there are so many different departments; it's very difficult to tell who is who—was told that the tops of our mountain ranges are being ripped apart to put wind turbines in. The proposed Chalumbin Wind Farm in North Queensland is actually putting these windfarms above the bird habitats. Do you have anything to do with where these wind turbines are built or anything like that?

**Ms Savage:** No.

**Senator RENNICK:** What about the run-off to the reef of all the erosion caused by these?

**Ms Savage:** No. We monitor and report on the wholesale market. That's why I know a little bit about generation technology.

**Senator RENNICK:** That's fine. Have you noticed a difference between reliability in smaller windfarms and larger windfarms?

**Ms Savage:** We haven't done a comparative analysis of different types of wind turbines. We look at the market in aggregate. That's our job.

**Senator RENNICK:** Do you think it's a problem—the fact that GenCost has it at 40 per cent capacity for windfarms but it's actually 50 per cent higher than what's actually happening? And, as a result, we've got politician saying that renewables are cheaper when they may not actually be cheaper.

**Ms Savage:** What I understood about your question—and I may have misunderstood—is I thought you were talking about how the cost of new investment compares. So, if you're building a wind farm today versus a coal plant today versus a gas plant, what's the cheapest form of energy? If you're using a new investment, you wouldn't use an average number; you would use a higher capacity factor.

**Senator RENNICK:** What discount rate is used for wind, solar and coal?

**Ms Savage:** I can't answer that. We don't build windfarms.

**Senator RENNICK:** In your forecast?

**Ms Savage:** We're not forecasting it; you were just asking me about how the work is done. Different studies will use different discount rates. We can take notice to come back to you with what discount rate the CSIRO uses or what discount rate the International Energy Agency uses, but we don't use our own estimates in the AER.

**Senator RENNICK:** You just look at actual costs?

**Ms Savage:** We look at other reported costs of other studies, yes.

**CHAIR:** Senator Cadell.

**Senator CADELL:** Last time we were talking about transmission lines through agricultural lands and high-value environmental lands. I understand you guys are the rule setters, not the gatekeepers. What was said was: you have a duty to supply lowest cost to consumer of transmission lines of the solutions you are presented by the transmission companies—is that still correct?

**Ms Savage:** Yes, we have to, basically, look at whether the investment is prudent and efficient. So we would be looking at how the costs have been determined.

**Senator CADELL:** What changes in policy and/or legislation would we have to look at not just lowest cost to consumer but lowest real cost in terms of protecting lands, undergrounding and these sorts of things where your hands are free to make a more balanced approach on total economic cost, not consumer cost?

**Ms Savage:** What we would look at is the prudent and efficient cost of a transmission project in approving that. So, when you're thinking about prudence, you do also consider issues like social licence. We actually are just about to start a piece of work to provide greater clarity to transmission builders and project developers about what sorts of costs would be prudent and efficient in that context. But it's not as though we would say, 'Well, we're only going to approve a project that goes from here to here,' if it were never be able to be built, so we have to take into consideration the prudence of that expenditure, the time it would take to get it built and the impact on local communities. You would already see, when we approved Project EnergyConnect between South Australia and New South Wales, we gave a 'higher level' of allowance to Transgrid and ElectraNet to enable them to do those sorts of negotiations with landholders. In fact, we've done undergrounding of parts of the network in Victoria because of bushfires. So we have to weigh up both prudence and efficiency.

**Senator CADELL:** I guess where I'm coming from is: we are undergrounding because of bushfires, but we're not undergrounding on agricultural land or on environmentally sensitive land and these sorts of things. When does that come into focus? Where is the gateway where we start thinking, 'Oh, we have to start considering these'?

**Ms Savage:** My understanding is that when the transmission companies go through their planning processes now, they're required through part of the Regulated Investment Test for Transmission—I'm trying not to use acronyms; they send me into alphabet soup—

**Senator CADELL:** We've got some great ones!

**Ms Savage:** Yes. When they're undertaking that consultation, obviously that includes community engagement and stakeholder consultation. Through that, they'd be looking at different routes—route selection is obviously part of it. It's also about sensitive areas, whether it's prime agricultural land, or impacting on a national park or going through bushfire-sensitive areas. Those are all part of their consideration in that context, and also thinking about the sorts of arrangements or agreements they might have to make with landholders to purchase land. All of that goes into their consideration in putting together their application to us. Firstly, it's choosing the route as part of the Regulated Investment Test for Transmission and then it's the contingent project application to us, which is the cost-effectiveness application.

For us, it would be about making sure that they've gone through a sufficient process of community consultation to make sure they've got support for the project and that it can be built. We've seen lots of opposition to transmission—

**Senator CADELL:** Do you test that individually yourselves?

**Ms Savage:** We look at the prudence and efficiency of what they've said they need to spend. If they came to us and said, 'We actually just want to spend \$50 billion undergrounding the whole thing,' we'd probably say, 'Really?' But if they said, 'There are these parts of the network where we think it's prudent and efficient to take a different route, or to do something else, because, without this, we'll never get this project up,' that's where we'd try to think more about how we'd give greater guidance to the businesses in that regard.

The Australian Energy Market Commission has been doing a transmission planning and investment review. I'm not sure if you're aware of that, but I think it would probably be of quite a bit of interest to you. In that, they've been looking at what's required for social licence. They've asked us to provide greater guidance to businesses as a result of that. We are about to kick off that work now.

**Senator CADELL:** Great. There has been some buck-passing. I met with some transmission infrastructure builders and they threw you guys under the bus without blinking—

**Ms Savage:** Yes.

**Senator CADELL:** It was lovely to watch—it was actually quite skilful! But they said that they came to you and you demanded the lowest cost to the consumer, that there was no talk about these things. And the answer was, 'We would love to build more because we have a guaranteed return on investment,' and about building better, but that is not the case, is it? These people come to you with what they want to build. If they suggested underground because of social licence, would you consider that as their prime proposal?

**Ms Savage:** They put the proposal to us; we don't put a proposal to them—

**Senator CADELL:** They called it a 'solution'.

**Ms Savage:** Yes. They put forward a 'solution'. We have to assess both the prudence and the efficiency of that. That's what the rules require us to do. If they make the case that it's both prudent and efficient to spend this money then we would consider it in that context.

**Senator CADELL:** So, potentially, sometimes infrastructure companies should try harder to find what's prudent and efficient, shouldn't they?

**Ms Savage:** It is up to them to do that! Obviously, we will balance the sorts of things I was talking to Senator Roberts about before: price, reliability, safety and security. Those are the things that we have to consider as part of the National Electricity Objective. But, ultimately, we're looking for both the prudent and efficient delivery of the infrastructure.

**Senator CADELL:** Yes. I think we've used numbers in previous estimates in narrowing down to the number of transmission lines built now. We got up to 28,000 and now we're talking about between 2,000 and 10,000 kilometres. Is that the number you're still working on over the next 10 years?

**Ms Savage:** My understanding is that the numbers in the Integrated System Plan—and I think it was actually Mr Duggan who corrected me earlier on this today—are 10,000 to 2050 and 3,000 to 2030.

**Senator CADELL:** Yes, that's what I heard today. That 28,000 is out the window now, never to be spoken of again?

**Ms Savage:** I'm not sure what the 28,000 is.

**Mr Duggan:** Yes, it's not part of AEMO's—

**Ms Savage:** No.

**Senator CADELL:** That's great. Places like Queensland have just come out in an article, I think this week, maybe even today—

**Senator VAN:** It was over the weekend.

**Senator CADELL:** Over the weekend—talking about \$300,000 per kilometre, plus paying neighbours.

**Ms Savage:** Yes.

**Senator CADELL:** How does that fit into the plans you're doing, where it just comes to you and you take it? If it's in Queensland, then is that what it costs?

**Ms Savage:** If it's a regulation from a state we have to take it—basically, we have to accept it. Under the New South Wales road map and their priority transmission infrastructure projects, they have also made some allowances for community payments—both community and neighbour contributions.

**Senator CADELL:** That's about \$200,000, isn't it?

**Ms Savage:** That's per kilometre—yes, I think it is, over 10 years.

**Senator DAVEY:** But that's only the landholder, isn't it?

**Senator CADELL:** Yes, not neighbours.

**Ms Savage:** That's landholders, that's right. But then there's a community contribution as well. Queensland is doing something slightly different, but the way in which it works is that as soon as a state government says, 'This is the policy,' that it's a regulated requirement, we basically have to allow the transmission companies to recover that regulated requirement.

**Senator CADELL:** If states put in a regulation that they had underground under easy or moderate things—if those were the state guidelines—would that flow through—companies would have to comply?

**Ms Savage:** If it were a requirement, yes, they would have to.

**Senator CADELL:** I'll change parliaments!

**Ms Savage:** Even under our contingent project applications, there tends to be what's called regulatory reopeners. What happens is they come to us, for example, for a cost pass or if the regulations change between when we did it and when they have to recover costs.

**Senator DAVEY:** Can I just clarify one point?

**Senator CADELL:** Exactly the same niche point, please, Chair.

**Senator DAVEY:** We've heard that Queensland have come out with their payment of \$300,000. You've mentioned New South Wales, and you say you just take it from the states as fait accompli; if the states say 'compulsory acquisition', that's up to the states. So what I'm hearing is Victorians are getting duded because they're getting the lowest price plus compulsory acquisition.

**Senator CADELL:** And they have to watch AFL!

**Ms Savage:** Sometimes we allow more than compulsory acquisition if it's prudent and efficient to enable the project to be built. That's what I was saying with the Project EnergyConnect example. We allowed more than the compulsory acquisition cost. We allowed, essentially, a landholder compensation amount because the businesses came to us and said, 'This is what we think is necessary to build the social licence for this project,' so we allowed that in that context. It's not always the minimum in that sense, but when a state does say, 'The minimum is going to be \$200,000 or \$300,000 and you must pay that,' because they're required by law, we have to, by law, allow them to recover that.

**Senator CADELL:** Thank you for that wonderful explanation.

**Senator DAVEY:** Excellent.

**Ms Savage:** That's nice feedback. Thank you.

**CHAIR:** Senator Payman.

**Senator PAYMAN:** Thank you, Chair. Ms Savage, I want to talk about wholesale electricity prices. Since the government acted on power prices last year, how have the forward prices on retail energy changed?

**Ms Savage:** In about early October—I think it was probably 11 October—we were seeing that the forward price for electricity—when I say 'forward price for electricity', I'm referring to the contracts that retailers are buying to be supplied electricity in the 2023-24 period. That is the financial year that we're interested in from a default market offer. The price of those contracts in October last year was about \$230 a megawatt-hour. We then saw in the October budget some discussion of potential interventions, and the prices came down at that point. Then they fell further following the announcement of the interventions after National Cabinet in early December. Earlier this year, around January and February, they were probably at their lowest point since before the energy crisis last year. We did see the delayed return of the Callide power station in Queensland. That saw a little bump in prices in March, but they are still today, in May, about 40 per cent lower than what they were at the start of October.

**Senator PAYMAN:** What do you think will be the impact of the rebates that were announced in the budget on vulnerable and targeted households?

**Ms Savage:** Obviously that's a policy of the Commonwealth and the state and territory governments. As an independent agency, we don't have a view on the policy per se. What I can observe is that, when we had our draft decision, price increases for customers who were on standing offers in New South Wales, South Australia and Queensland were in that \$300 to high \$400 sort of mark. My understanding is that, in those jurisdictions, eligible residential customers will receive a rebate of \$500, which, at the draft decision stage, seemed to more than offset the impact of the rise in the default market offer.

**Senator PAYMAN:** Thank you, Ms Savage.

**CHAIR:** Senator Hughes.

**Senator HUGHES:** I'll be very quick because I know we're getting to when we're supposed to break. Ms Savage, with regard to the DMO draft, which will obviously become the DMO final very, very soon, could you please confirm the price increases for many households: New South Wales 23.7, South Australia 21.8, South-East Queensland 19.8, regional Queensland 28.9 and Victoria 31.1?

**Ms Savage:** You just want me to confirm the default market offer draft prices?

**Senator HUGHES:** Yes. As it moves from draft to final, are we in the same ballpark, or are we moving?

**Ms Savage:** The final decision is out on Thursday this week, and it is market sensitive, so I probably shouldn't comment on it.

**Senator HUGHES:** All the timings, in relation to estimates, just seem extraordinary—submissions close tonight, the draft comes out on Thursday, and it's all just after we finish estimates.

**Ms Savage:** Senator, it was your government that made it—

**Senator HUGHES:** I know, very fortunate timing for when estimates were put on, though.

**Ms Savage:** In answer to your question, we would only have updated estimates for South Australia, New South Wales and South-East Queensland, and I'm happy to say to you that it's in the ballpark.

**Senator HUGHES:** Okay. Just to confirm, and I'm happy to leave it there, they are considerably higher than the 10 per cent the government's claiming?



**Ms Savage:** My understanding of the modelling the government has done is that it's not of the default market offer. If you're talking about the Treasury number, my understanding is their modelling is of all customers in all jurisdictions. What we're estimating with a default market offer is just the 10 per cent—

**Senator HUGHES:** It has got to be difficult when WA aren't even connected to the same market.

**Ms Savage:** But I think the Treasury number is as an Australia wide number.

**Senator HUGHES:** Yes, convenient.

**Ms Savage:** What we're doing is just the default market offer customers in South Australia, New South Wales and South-East Queensland, so that's only about 630,000 residential and small-business customers. So we're only doing a very small subset of what I think that Treasury modelling is doing.

**CHAIR:** Senator Van.

**Senator VAN:** Ms Savage, what responsibilities do AEMO and project proponents have to stick within certain compliance guidelines for their project assessment draft reports?

**Ms Savage:** Are you talking about what the process is from the AER's perspective or from—

**Senator VAN:** Yes. If there are complaints about compliance with the process, do you get involved in looking at those complaints?

**Ms Savage:** We would be involved in dispute resolution. There are a few things. If it's an actionable integrated system plan project, so it's one of the ones that appears in the ISP—

**Senator VAN:** Like VNI West.

**Ms Savage:** Yes, like VNI West, for example, or HumeLink. Essentially, when they go through the process of doing the regulated investment test for transmission and they're developing the project assessment draft report and then the project assessment conclusions report—

**Senator VAN:** You can use acronyms.

**Ms Savage:** I don't want to use the acronyms, for the sake of other senators. When they're doing that, people can come to us and say that they have concerns, and we have an issues register. We can put those concerns on the issues register and then, at the time that AEMO—or, in the case of VNI West, AEMO and Transgrid—issue the project assessment conclusions report, they would need to have resolved those issues from the issues register. There is then also the ability to lodge a dispute on how, essentially, that project assessment conclusions report has been done, and we would then have to, obviously, evaluate that dispute. A good example is we got a dispute on HumeLink, we made a determination that they hadn't included all the options, and they were required to redo the PACR, basically, with all the credible options in there. For the Victorian element of VNI West, the Victorian government has put in place what they call a NEVA order. I actually don't know what that acronym stands for, I apologise, but the NEVA order does slightly modify the rules that apply to the Victorian section of the VNI West project. But, because we have to approve the contingent project application for the New South Wales side, there still has to be a compliant project assessment conclusions report. I'll just check with my colleague that I answered that correctly.

**Senator VAN:** Therein lies my question: given that you're the Australian Energy Regulator, responsible to all Australians, don't you think it's a bit off or a bit smelly that states can just step around you?

**Ms Savage:** I have just been reminded of my Public Service Act obligations, so I won't comment on the policy of the Victorian government because that is policy for them.

**Senator VAN:** Shouldn't the Australian Energy Regulator regulate for all Australians?

**Ms Savage:** The Australian Energy Regulator does regulate for all Australians, and so we are continuing to have a role in Victoria, but the Victorian government has chosen to give us a different role to what we have in other jurisdictions.

**Senator VAN:** Unless a state cuts you out of it. It sort of spells the end of national energy regulation, operation and market, I would contend. But that's a comment.

**CHAIR:** Indeed, you're entitled to your opinion and a comment.

**Senator McAllister:** Chair, I want to follow up on Senator Hughes's implied question, which was: had the estimates, in some way, been timed to avoid questioning about the DMO? Obviously, that is not the case, and I want to reassure the committee that it is not the case. It may be of interest to senators to understand that the timing of the DMO was changed by Minister Taylor when he was the minister for energy and he made a deliberate decision to move the timing of the DMO. It would be out already, had such a change not been implemented by the former minister.

**Senator HUGHES:** We have had instances before where the energy minister put the energy ministers meeting on the day of the estimates. So, it would be helpful perhaps for the government to look at the calendar when estimates are set and perhaps ensure that we're not consistently being—

**Senator McAllister:** Senator Hughes, you raised a particular concern about the timing of this estimates, and I simply wanted to reassure the committee that that has no basis or grounds.

**CHAIR:** And another point of clarity on the energy ministers meeting: you will remember that that was an additional week of estimates that was put in after the calendar was released.

**Senator HUGHES:** Because we'd had a week of estimates cut. This government wanted transparency and cut estimates and had to put it back in. So, it's just a pattern. It's a pattern to be noted.

**Senator McAllister:** Well, Senator Hughes—

**Senator HUGHES:** This transparency's so good!

**Senator McAllister:** I can assure you that this is a government committed to transparency—

**Senator HUGHES:** Seriously! Do we need to go through the OPDs in the Senate that you refused?

**Senator McAllister:** We can run through the range of measures—

**Senator HUGHES:** Do we need to have—

**CHAIR:** Okay—Senator Hughes.

**Senator HUGHES:** I was happy to leave it at 6.30, but let's just not make stuff up.

**CHAIR:** Let's just leave it there. We could throw barbs at each other all night long.

We will release the Australian Energy Regulator. Thank you very much for your time tonight. We really appreciate it.

### **Proceedings suspended from 18:31 to 19:30**

#### **Clean Energy Finance Corporation**

**CHAIR:** I now call officers from the Clean Energy Finance Corporation and welcome, Mr Ian Learmonth, the Chief Executive Officer. Would you like to make an opening statement?

**Mr Learmonth:** I won't; thank you, Chair. I am happy to go straight to questions.

**CHAIR:** Fantastic. We will go directly to Senator Waters.

**Senator WATERS:** Thanks so much for joining us tonight and for your ongoing efforts to have a safe climate. I understand you've been allocated another \$1 billion in this most recent budget for electrification and energy performance. Is that correct?

**Mr Learmonth:** That is correct.

**Senator WATERS:** Given the current economic circumstances of inflation, huge interest rates and unaffordable rents et cetera, we can probably assume that most households won't want to take out loans, as such, even if they are concessional. I am interested in whether you have thought about any other means of supporting households that didn't require loans.

**Mr Learmonth:** There are a couple of things there. In some ways, by definition, we about providing finance and, in other cases, we invest. We are minority equity investors. The \$1 billion that you refer to is very much based around financing, concessional finance, to drive change and improvements across household Australia. We have been doing that sort of thing for many years. It is great, and well received, to have an additional billion dollars to do more of it. There's a whole raft of things required to help decarbonise residential Australia and improve energy efficiency—for example, technology investments, which we are involved in, as well as providing low-cost finance for people across the country.

**Senator WATERS:** Will you be working with retailers to, for example, enable a product where householders could face no up-front costs but could essentially pay off the investment through savings in their bill?

**Mr Learmonth:** We have been working with retailers for many years. Today we don't have any active products or arrangements with any of them, but that will certainly be an option for a way of, as you say, addressing energy efficiency in the house.

**Senator WATERS:** Is that a means through which some of the \$1 billion could potentially be distributed?

**Mr Learmonth:** It is a potential option. I think the most likely channels will be through large banks, finance companies and credit unions that have good reach across household Australia.

**Senator WATERS:** You mentioned that you have, over the years, looked at that sort of model where it is at no up-front cost to the householder but a payback through bill saving kind of model. I'm not sure what terminology you use to describe that model. Would you say that you have the skills and the contacts with retailers to create those sorts of products and enable homes to do that sort of thing?

**Mr Learmonth:** We certainly have very deep expertise in finance and the structuring of financial products. They may well have application to working with retailers to reach households. So we certainly have the skill to do that sort of thing.

**Senator WATERS:** Part of the agreement secured between the Greens and the government for this money was to ensure that it be directed towards renters and low-income households. How will the CEFC ensure that this new money reaches those important groups?

**Mr Learmonth:** We are very aware that that is part of the policy objective. We only know what we have heard in the budget, and of course we have been working with the department in terms of costing the implementation of this particular initiative. But the details of it and how it might be directed to middle- to lower-income households will take place through an investment mandate, and we are yet to receive that investment mandate.

**Senator WATERS:** Correct me if I am wrong, but I understand the government usually drafts the investment mandate. Is there a time frame on that, Minister?

**Senator McAllister:** We're working through it. We're obviously keen to provide it as soon as we can to the CEFC so that they can begin working with partners to shape up opportunities and options. In regard to some of your earlier questions, I think we would hope that over time, because the funding will allow the CEFC to work on these kinds of products over time, we'll be able to see them work in innovative ways, including reaching some of those difficult-to-reach cohorts, other than home owner-occupiers.

**Senator WATERS:** Just for clarity's sake, they're normally disallowable instruments, if memory serves me correctly. Will that be the case for this one as well?

**Mr Every:** They are non-disallowable instruments.

**Senator WATERS:** Thank you, I'm glad I asked. Can I ask now about your role in Rewiring the Nation. Can you explain for me the structure between the CEFC and the department on that? Does the department do the policymaking and the arrangements and then you do the financing, or do you come in earlier than that?

**Mr Learmonth:** Certainly, we'll be doing the financing—that's the intention. The CEFC will be appropriated a further \$19 billion that will be used to invest in the Rewiring the Nation policy, which will translate to transmission and other related projects across the country. The policy will be the responsibility of the government and the department, and the investment mandate will outline the nature of that throughout the document. We are already well prepared for that. We're engaging with the Rewiring the Nation Office, which is part of the department, AEMO and the Energy Infrastructure Commissioner. So there's already a lot of work underway, but, primarily, the CEFC is the financier of Rewiring the Nation.

**Senator WATERS:** With the work that's already underway, is that again relating to financing, or are you branching out into other areas?

**Mr Learmonth:** Under our act, we are only able to lend money or invest equity. We're not grantmakers; we don't do other unrelated things. So, yes, we would be looking at providing finance.

**Senator WATERS:** Great. I think you've previously acknowledged that Australia is installing 2.3 gigawatts a year of renewables when, to meet the 2030 renewables target, it needs to be more like 3.6 gigawatts a year—correct me if I'm wrong on those figures. What can the CEFC be doing to speed up the rollout of renewables and storage?

**Mr Learmonth:** The 2.3 gigawatts number is from the Clean Energy Council for last year's installation of large-scale renewable energy capacity, so it's really one year. In prior years, it had even more, and we hope, of course, that future years will as well. That's really just a reference point to one year, and I made the observation that, to get to 82 per cent renewables, we would need to have an estimated trajectory of about 3.6 gigawatts per annum. So we'll need to do more work there, and we see that as part of our responsibilities—providing finance to wind, solar and storage projects across the country particularly where we can use either our innovative financial products or structures to help those projects come to life. Again, it could be concessionality, it could be offering tenor, or it could be taking a slice in the capital structure that allows these projects to come to life.

**Senator WATERS:** How frequently do you take a slice of the capital infrastructure?

**Mr Learmonth:** From time to time. In some cases, there are senior lenders and equity investors, but for whatever reason it might be—the return expectations or how much debt senior debt banks are prepared to provide—there may be a gap in that capital structure. I'm not sure I could quote the exact figure, but we are often providing mezzanine or subordinated debt into projects.

**Senator WATERS:** Lastly from me, the US Congress's Inflation Reduction Act is sucking a lot of capital for clean energy towards them. Are you seeing a slowdown in applications here as a result of that, and have you thought about how Australia can compete against that?

**Mr Learmonth:** It is interesting. At this stage, we haven't detected any noticeable change in projects or applications to the CEFC. The Inflation Reduction Act is a very significant policy initiative in the US. It is many hundreds of billions of US dollars and there is, of course, a lot of commentary about the implications that will have on Australian industries, including potentially the hydrogen industry. We know that the government have looked closely at how they might respond to that. With initiatives around critical minerals and, of course, the announcement of Hydrogen Headstart policy, which we fully support and we hope to be financing hydrogen projects that are supported under that policy, we see government responding to it. But there is no getting around it: the IRA is very significant and an attraction to the US.

**Senator WATERS:** My last question is: is there anything that you think this committee should know that we haven't already asked you about?

**Mr Learmonth:** We are doing a fine job!

**Senator WATERS:** Apart from self-aggrandisement—although in this case it is deserving.

**Senator McAllister:** You did open yourself up to that one.

**Senator WATERS:** Is there anything that you think we need to know that we haven't asked about previously?

**Mr Learmonth:** Nothing that comes to mind, Senator. If, by the end, I think of something, I will make a statement.

**Senator WATERS:** Thank you.

**Senator HUGHES:** How much additional funding will the CEFC receive following this federal budget?

**Mr Learmonth:** As outlined in the budget, there is the \$19 billion for Rewiring the Nation, which still needs legislation before that can finally be appropriated to the CEFC. There is the \$1 billion from the Housing Energy Upgrades Fund and there's \$500 million related to the Powering Australia Technology Fund.

**Senator HUGHES:** Is this additional funding?

**Mr Learmonth:** Additional to the original \$10 billion from when we were set up; that's right.

**Senator HUGHES:** But the CEFC remains independent of government?

**Mr Learmonth:** Under the act, there is independence at board level in terms of making decisions around transactions. The final investment decision sits with the board.

**Senator HUGHES:** I guess why I'm asking you this is I'm just a bit concerned. A direct quote from *Hansard* is: 'The CEFC will function like the financial arm of the department, through partnership with its Rewiring the Nation Office and the market operator, in assisting with the government's 43 per cent reduction by 2030.' You can't have independence but then act like the 'financial arm of the department'.

**Mr Learmonth:** Our act has been changed to accommodate the new climate targets of the government. The object of the CEFC Act was originally to facilitate the flows of funds into the clean energy sector. Now, as well as that, it is to help the government achieve their climate goals, most notably a 43 per cent reduction by 2030 and net zero by 2050. We would, of course, be instructed and guided by that change in the act. But, again, the independence of decision-making on individual investment transactions still operate independently of government.

**Ms Evans:** Senator, I'm not sure if that was a quote from earlier this evening or whether—

**Senator HUGHES:** It wasn't this evening; it is in *Hansard*. I will get a copy of it for you.

**Ms Evans:** From earlier today?

**Senator HUGHES:** No, from within parliament—within the Senate. We'll get a copy of it for you.

**Ms Evans:** Either way, it is certainly not the case that the department would have any ability to direct the CEFC in these matters. Mr Learmonth is quite right that it is still a statutory independent organisation with its own board, and all the decisions it would make would be subject to that board's approval and not directed in any way by the department or the minister. I don't know where that quote has come from but I don't think it was

intended to imply that that sense of the independence of the CEFC had changed. It certainly is the case that the majority of the funding for Powering the Regions will be handled by the CEFC, so perhaps, if it was a member of the department, it was just an awkward way of expressing the fact that the financing will be done by the CEFC.

**Senator HUGHES:** Obviously, in light of this independence, Mr Learmonth, is the CEFC giving any consideration to supporting the call for lifting legislative prohibitions on nuclear energy in Australia, to ensure that we can better serve the energy needs of Australians moving forward?

**Mr Learmonth:** We're not involved in anything like that. That's purely a matter for government.

**Senator HUGHES:** So you have no view, with regard to the national energy objectives, as to whether or not nuclear should play a role in that?

**Mr Learmonth:** We're precluded from investing in nuclear energy, as you know.

**Senator HUGHES:** We're precluded from discussing it.

**Mr Learmonth:** While I don't think it's appropriate for me to share any personal views—

**Senator HUGHES:** We'll never know if there's a business case, because we're not allowed to do one.

**Mr Learmonth:** Well, as I say, it's really a matter for the government.

**Senator HUGHES:** Okay. I might leave it there at this stage.

**Senator CADELL:** Mr Learmonth, on your website it says \$4.6 billion is currently available. Is that out of the original \$10 billion?

**Mr Learmonth:** That's right.

**Senator CADELL:** Is this funding that comes to you as grant funding—an allocation of funding—or do you have to service that? Is there any type of interest or service on the debt that you have to return?

**Mr Learmonth:** No. Maybe I'll just go back a step. The way that we're capitalised is that we're funded directly from Canberra. We don't issue bonds, we don't borrow in the market, so we're sort of a pool of—

**Senator CADELL:** So your WACC is zero?

**Mr Learmonth:** Well, I guess you could look at it like that. We don't have any cost of funds, that's true. The money comes to us, we invest it, we lend it out and then we keep the retained earnings from those projects.

**Mr Powell:** Senator, I might just clarify one thing there, which is that we don't receive the whole amount of funds upfront. There is a special account maintained by the department. We only draw down equity as and when we need it to fund transactions and return to that account when we have—

**Senator CADELL:** It was more around the cost of your capital going forward. Are your offers that are now going out on applications maintaining a discount under commercial terms, with the increased interest rates, or are they still at historical rates?

**Mr Learmonth:** It depends on the transactions involved. You mentioned grants before. We obviously don't do—

**Senator CADELL:** You don't do that?

**Mr Learmonth:** No, we don't do any grants. So we're out there lending and investing right across the economy in renewable energy, energy efficiency, low-emissions technologies—all sorts of different things—and our returns are really dependent on the individual transactions. And, in nearly every case, they're above the government's cost of funds. In fact, under our current investment mandate our core portfolio is required to target a return of three to four per cent above the five-year government bond rate. That's the target return, and today we probably sit a per cent or so under that.

**Senator CADELL:** Is that on portfolio terms or on new terms going out the door?

**Mr Learmonth:** On portfolio terms.

**Senator CADELL:** So historical legacies of lower rates?

**Mr Learmonth:** It sort of goes up and down as interest rates move, so we're looking at that incremental margin, if you like.

**Mr Powell:** Senator, there is no doubt that, as interest rates rise, in order to be able to stimulate the policy outcomes we will need to provide further concession than you need to at a lower interest rate. That's just a given.

**Senator CADELL:** Senator Waters was asking about the Inflation Reduction Act. We are competing against the big boys. You've raised the hundreds of billions of US dollars, which could go even bigger—or it might not; it might be all over in a week with debt reduction. Here's hoping! In hydrogen projects we're seeing figures of \$3 a

kilogram for hydrogen projects in America. We've got firsthand knowledge. Senator Van and I know a group that have been promoted to go to the World Economic Forum. An Australian company has been invited to go as the guest of an American funding body. So it's not just the competition for loans being left to application. Are we getting a lower quality? Are we getting a lower uptake of acceptance? We're making these offers, but there are a certain number of businesses in this space that are getting Middle Eastern sovereign trust allocations with the American IRA. You're in a worldwide market. You've got \$4.6 billion against hundreds of billions. Are you armed enough to do what you want to do?

**Mr Learmonth:** First, I'll start by saying the standard of application or the standard of project that we might be investing in or financing hasn't changed with the introduction of the IRA. We maintain our existing standard and approach and due diligence and rigour and all the deals that we do. I guess what you're getting to is anticipating over the medium to longer term that there might be a movement of capital and a movement, potentially, of some players to the US, and that is quite possible if the IRA continues to offer those subsidies. But we're focused here on Australian opportunities—wind, solar, storage, hydrogen as well as electric vehicles and critical minerals, so it's a very broad range. The investment spectrum in Australia is across a very broad range, and I think we'll continue to see lots of good opportunities, but we can only speculate as to who might leave and go to the US.

**Senator CADELL:** Has there been no drop in the letters of offers versus conversion?

**Mr Learmonth:** If the control group is what we saw last year, for example—in fact, this year we're likely to have a greater level of commitments to transactions than we did in the last financial year. That's what the forecast would tell us. But that's no indication of the coming years.

**Senator CADELL:** To plagiarise and bastardise the Foo Fighters, the US aren't getting the best of us while we're get the rest of us—is this how it's going?

**Mr Learmonth:** I think that's fair today.

**Senator VAN:** Can you sing it?

**Senator CADELL:** No. That is very unparliamentary!

**CHAIR:** Senator Roberts.

**Senator ROBERTS:** At the last Senate estimates, I submitted some questions on notice asking for how the returns for wind and solar investments compare to other financial investments or benchmarks. The CEFC answered very vaguely and essentially said, 'Depends.' The number for that question and response is SQ23-000642. In your annual report, you are happy to tout a percentage but not in your answer to me, apparently. In your report you say, since the Clean Energy Finance Corporation's inception you have achieved an annualised return of 4.48 per cent, which adds up to 55 per cent in total over 10 years. The ASX 200 over the same period has returned 67 per cent. That's 27 April 2012 to 20 May 2023. An investment in the Australian benchmark would have returned a 22 per cent better profit than the Clean Energy Finance Corporation. Why are your investments in supposedly clean energy, which is not clean—just have a look at what happens when heavy metals out of abandoned solar panels get into the water supply or oil from a malfunctioning wind turbine leaks into the ocean—so poor compared to the Australian benchmark?

**Mr Learmonth:** There are a few things in there. Firstly, that 4.48 that you refer to doesn't just cover renewable energy of wind and solar, if that's what's going to be in your sights; it covers the whole portfolio, and that's everything from green bonds, loans to industrial companies to reduce emissions, technology investments with venture capital, limited partnership interests in funds in sectors like the built environment, agriculture and infrastructure. So it's very, very broad. You can't possibly hone it in just around wind and solar.

The other thing I would note is you're making the point that our returns appear inadequate or are below what other commercial benchmarks should be. The CEFC's capital is about driving policy outcomes as well as making appropriate return, so it's about decarbonising the electricity sector. It's about fuel switching and energy efficiency. In many cases, we may make a below-market return because that's what's needed to bring a project online or take a technology down a learning curve. So I don't think you can use those very sweeping references to apply to the CEFC.

**Senator ROBERTS:** Let me interpret that. You're saying that the subpar performance is a cost of subsidising government policy objectives?

**Mr Learmonth:** I wouldn't put it like that. I would say that if you felt that we weren't reaching some kind of commercial benchmark, that's probably a reflection of the way that we are using our capital to deliver on the policy objectives of the CEFC. But, equally, we are a lender. Today 70 per cent, broadly, of our portfolio is debt.

So you can't compare it to an index like the ASX or some ETF or whatever it might be, because a secured loan is a relatively low yielding investment compared to putting money into a technology company where you might expect 25 per cent. So, again, I don't think we are comparing apples with apples.

**Senator ROBERTS:** That's fair enough. I'm asking for more details, because the response to the question on notice was not detailed and not respectful, in my opinion. It was very vague.

**Mr Learmonth:** I'm happy to provide you with more information around that and break it down by sectors to demonstrate that and give you a bit more background to the return, the 4.48 that you refer to.

**Senator ROBERTS:** Can you take that on notice?

**Mr Learmonth:** I can do that, very happily.

**Senator ROBERTS:** Perhaps something else you could take on notice is: why should Australian taxpayers be giving you the extra \$20.5 billion Labor has given you in this budget, given you are not even close to the Australian benchmark. You can explain why you're not close to the benchmark. That's fair enough. But why should the Australian taxpayers be giving you an extra \$20.5 billion?

**Mr Learmonth:** I can start, and I'm sure others may have views on this. The money is being appropriated and delivered to the CEFC to help deliver on some very defined policy objectives, like Rewiring the Nation, like Household Energy Upgrades and, thirdly, investing in growing technology companies here in Australia. We were proven to have done a very good job over the last 10 years on investing, lending and using capital to achieve these environmental outcomes. One can only assume that's why the government was prepared to back us into doing more.

**Senator McAllister:** Senator Roberts, obviously you fundamentally don't believe that it is necessary to reduce carbon emissions.

**Senator ROBERTS:** I know so.

**Senator McAllister:** It is a difference of opinion between you and the Australian government. As I understand it, it is also a difference of opinion—

**Senator ROBERTS:** Minister, you have repeatedly failed to provide the evidence for your policies.

**Senator McAllister:** between you and the opposition, as I understand their policy.

**Senator ROBERTS:** I think the opposition wouldn't agree with me.

**Senator McAllister:** Putting that to one side, having agreed that our policy is to reduce Australia's emissions, we therefore have to look at the policy levers that are available to us. One of the very successful levers, in my opinion, in the Australian landscape has been the CEFC. It is a different model to one that might conventionally be adopted using grants or direct funding to proponents, and instead seeks to increase financial flows into the clean energy sector, as Mr Learmonth has explained to you. It is one of a number of tools that the Australian government seeks to use to drive investment in the clean energy sector, and it has met that objective.

**Senator ROBERTS:** I understand that, but, repeatedly, you have failed to provide the specific effect of human carbon dioxide on any climate factor—temperature, storms, rainfall. You've repeatedly failed to provide that basis for policy. The whole thing is just running on fluff.

Let's continue the questions. I asked you on notice at the last Senate estimates if you had done modelling on what percentage of your returns are attributable to government subsidies and policies. Your answer to me was 'yes', as part of your due diligence. It is question No. 2 from the question on notice that I asked before. Question No. 2 says:

Have you done any modelling or investigation to find what percentage of these returns are attributable to government subsidies or policies?

Your answer was:

All revenue streams are taken into account as part of transaction assessment and due diligence.

So your answer to me was to say yes, as part of your due diligence. Given you've done that analysis, what percentage of returns for investments are attributable to government subsidies and policies?

**Mr Learmonth:** I'm just trying to understand your question, Senator. Our returns come from using government dollars—taxpayer dollars—that are either lent or invested by the CEFC. Therefore, using those dollars, we either receive interest or dividends, or, potentially, we might sell an equity investment and make a gain. That's where our revenue comes from. When you ask what percentage of that is coming from government subsidies, all our capital is coming from the government. All our returns come from the deployment of government capital. I'm just trying to understand what you mean by 'subsidies' there.

**Senator ROBERTS:** Do you get a return on your investment?

**Mr Learmonth:** Absolutely—

**Senator ROBERTS:** So what percentage—

**Mr Learmonth:** You inquired about it earlier, and that's correct.

**Senator ROBERTS:** Right. So what percentage of that is due to government subsidies?

**Mr Learmonth:** Again, I don't quite understand your question because all our capital is provided by the government. Someone might say, 'Well, that's not really a subsidy, it's a provision of capital from Treasury.'

**Senator ROBERTS:** Accept that.

**Mr Learmonth:** Therefore, we're not the recipients of subsidies. I might see if my—

**Senator ROBERTS:** Let me—

**CHAIR:** Mr Learmonth, I wonder if you could, in a very pithy fashion, outline the kind of organisation you are and its intent, because I think the senator has misunderstood that.

**Senator ROBERTS:** Perhaps I could clarify something: what part of your returns from your borrowers enables them to succeed because of government subsidies? They wouldn't have provided a return without those subsidies.

**Mr Every:** Are you thinking about matters such as the large-scale generation certificates, which the Renewable Energy Target—

**Senator ROBERTS:** No, I'm not thinking about that. I'm thinking about the actual return—the income that a person who is the borrower of your money, or our money, is able to make because of subsidies for solar and wind. Without those subsidies, would you have got a return?

**Mr Learmonth:** Oh, so you're referring to, say, a household subsidy for having solar panels, for example—

**Senator ROBERTS:** More to the point: you don't lend to households, I take it?

**Mr Learmonth:** We do via intermediaries; we actually do. We use—

**Senator ROBERTS:** But most of your lending is to large—

**Mr Learmonth:** Yes, a substantial portion is to large projects, large companies. That's part of it, but we also use intermediaries and partners like large Australian banks, for example, to provide mortgages for people to stimulate people to make their houses more energy efficient or to buy a more efficient home. They might access a green mortgage, so there's a very broad range of borrowers. They pay back the loans out of the money that they're generating in their business. That might be a small manufacturing company, it might be an agricultural company, or it might be a solar farm. Whether they are entitled through their businesses to subsidies, discounts or benefits through state and federal governments, one can only speculate about that.

**Senator ROBERTS:** Your mission and values say that the Clean Energy Finance Corporation is a specialist investor with a deep sense of purpose to invest as Australia's green bank to help achieve our national goal of net zero emissions by 2050. How many of your borrowers make a return because of government subsidies for solar and wind? In other words, without those subsidies, you would not be getting a return.

**Ms Learmonth:** I'm not sure about that. Let's talk about a solar or wind farm. We may lend them money to help them build out the generation plant, the wind turbines, the solar panels, for example. They either sell the electricity into the spot market, or they might have a contracting arrangement, so they generate income through that. Yes, a large utility-scale renewables project will also receive a generation certificate, a renewable certificate, which traces its way back to a different government policy, the RET, Renewable Energy Target, so some component of the income of a renewable energy project does come through a former government policy. But the majority of income comes from the sale of those electrons either to someone who wants them or into a market like the NEM spot market. They make that money, and, if we're the senior lender, we're the first person they'll pay. They'll pay us back interest and principal through those revenues.

**Senator ROBERTS:** Do you have any idea why, when we're told that solar and wind are now the cheapest form, we still need subsidies?

**Mr Learmonth:** We know that wind and solar, based on the cost of it and what they can produce, is today the lowest cost of energy.

**CHAIR:** We will rotate the call. Senator Payman.

**Senator PAYMAN:** If we can go back to the concessional personal loans, I just wanted a clarification of how many households that that funding will benefit, essentially?



**Mr Learmonth:** Senator, if you're referring to the additional billion dollars related to the household energy update fund—

**Senator PAYMAN:** Yes.

**Mr Learmonth:** Our understanding of the policy is it would incentivise household energy performance upgrades for over 110,000 homes.

**Senator PAYMAN:** What opportunities for power bill reductions are available from energy efficiency and electrification upgrades?

**Mr Learmonth:** All sorts of opportunities to do that, and it'll be a broad range. We expect—and from what we've read about the policy and what we see in the marketplace—offering concessional finance to households to take up solar panels, double glazing, energy efficient appliances and so on will lead to lower power bills.

**Senator PAYMAN:** I note that CEFC has engaged with CBA for green home loans in the past. Could you outline in a practical way how products like these will work for mortgage holders and consumers?

**Mr Learmonth:** Yes. That is correct. We have worked with the CBA and other banks like Bank Australia where we have provided wholesale finance to them—in the case of CBA, it was \$125 million—at a concessional rate on the basis that they use that concessional debt to provide low-cost mortgages to people who are buying homes that reach, in this case, the Green Building Council of Australia code at a certain level of energy efficiency. It's a way of using cheap finance to allow people to buy energy-efficient homes. So we work with banks to help devise and provide those sorts of products.

**Senator PAYMAN:** Just to confirm in my mind, the mortgage holder gets the benefit of energy upgrades while also being able to take advantage of lower interest rates?

**Mr Learmonth:** That's right. They are incentivised to acquire or, in other cases where we're providing finance around renovations, to build more energy efficient homes.

**Mr Every:** So they get the savings on the energy bill and the savings on the interest for taking out one of these types of loans.

**Senator PAYMAN:** That's great. To what extent will the government's announced regulatory reforms assist the creation of energy efficiency and electrification markets in the Australian economy?

**Mr Learmonth:** I guess the question is for the government as well, but the reforms that are anticipated about consistency around the NatHERS, which is the energy efficiency measure for households, will allow a greater degree of transparency and will allow financiers like us and initiatives like the Housing Energy Upgrades Fund to then target, on a consistent basis, houses that reach a certain degree of energy efficiency. We very much welcome those reforms, and we'll no doubt be working with them for these sorts of products.

**CHAIR:** Senator Van.

**Senator VAN:** Thank you very much for coming along and thank you for your work. The CEFC does a very good job helping reduce emissions through financing. That said, however, travelling around the country, as I do, meeting with clean tech companies and understanding what they're doing et cetera, a consistent refrain is that Australian clean energy tech companies are often ignored by the CEFC and financing often goes elsewhere. A good example would be Sunman, which CEFC made an investment in I believe?

**Mr Learmonth:** We have indeed made an investment in Sunman.

**Senator VAN:** I'll table this article if I may, Chair, just for Hansard. For those listening in, Sunman is predominantly owned by a Chinese owned company. Is that correct?

**Mr Learmonth:** It has a number of shareholders but its founder, Dr Zhengrong Shi, is a dual national and a graduate of the University of New South Wales. He's one of the great alumni of that university.

**Senator VAN:** What's happened with that company?

**Mr Learmonth:** We have made an investment in Sunman. In fact, we've invested in its Australian subsidiary. It is a company that is producing an ultra-lightweight solar panel, which is revolutionary in terms of rooftop solar and particularly how it will be rolled out across commercial and industrial rooftops, because in many cases they don't have the support to take the usual kind of weight of solar panels. It's incredible technology. It's a company that is growing rapidly. It has production capability not only in China but in other countries. It is targeting sales in North America and Europe. I'm optimistic it's going to be a great investment for the CEFC and therefore the Australian taxpayer.

**Senator VAN:** You make a very good point. A number of times today I've talked to different departments and agencies about being able to put the generation where the load is, which is what lightweight solar panels allow us

to do. But there are Australian owned and built companies out there that are doing exactly that, with even better product, which the CEFC wouldn't even look at. Out of the University of Newcastle, there's an Australian company—

**Mr Learmonth:** What's that company?

**Senator VAN:** Kardinia Energy. They approached you and were rebuffed. Why are we backing a Chinese company to do something that's a little bit lighter than a traditional solar panel and not backing an Australian company?

**Mr Learmonth:** We go through a rigorous process with all the technology companies that approach us, and we see many. However, we have invested in a lot of them. We've made something like 26 early-stage investments in innovative Australian technology companies, so we have done a lot of investing in this early-stage sector. We probably had approaches from many hundreds over the years. We assess them on the usual things—management, their intellectual property, the quality of the underlying product, the addressable market.

I'm happy to look into the situation with Kardinia, but, as I say, we're constantly evaluating Australian technology companies. We have made investments in many and we look forward to making many more. I don't think of Sunman as a Chinese company—it's a multi-jurisdictional company—and, as I said, its founder, Dr Zhengrong Shi, is one of the great Australian-Chinese innovators.

**Senator VAN:** And, I would say, taking production back to China rather than doing it here?

**Mr Learmonth:** It's interesting you mention that. There's production capability that the company is looking at in Europe and in the US.

**Senator CADELL:** And here in Australia?

**Senator VAN:** Not here in Australia. But that's by the by. Changing subjects slightly, with your new mandate to invest in transmission, we have shown that it's possible to do generation where the load is. You spoke highly about Sunman's ability to do that. I've talked up Kardinia's. But the fact is that transmission is only ever going to be done using concessional finance and with a rate of return. Earlier, you said that you go for a rate above the government bond rate?

**Mr Learmonth:** That's a targeted rate across the portfolio in what we call a general portfolio. There are specialised investment funds in different areas that the government has directed us to invest in. For example, there is hydrogen, the innovation fund and other areas where they might prescribe a different rate of return that we would seek to target.

**Senator VAN:** So what is that going to be on transmission investments?

**Mr Learmonth:** We haven't received the investment mandate on it yet. But it is fair to say that we would expect that to be targeting concessional finance.

**Senator VAN:** This is the point you made earlier, so I understand what you've just said. But earlier you said you'd do a rate of return above the government bond of how much? Was it 3.8 per cent?

**Mr Learmonth:** Well, since inception, our cumulative per annum return of the portfolio has been something like—I thought 4.3 per cent.

**Mr Powell:** It's 4.31 per cent currently, through the end of March 2023. The government's cost of funds on that same basis has been about 1.9 per cent during that period. So the spread between the 4.31 per cent and the 1.9 per cent is the amount we're achieving over the government bond rate.

**Senator VAN:** The 10 year bond rate is 3.59 per cent. If you're wanting to add your margin on top of that, the AER's rate of capital return is going to bring you in well under that, isn't it? So losing money on transmission.

**Mr Learmonth:** I think we might be blending different things. When you talk about the current rate, the rate that we're referring to, the 4.31 per cent, that is obviously rolling up years of incredibly low interest rates. So we're now in a different interest rate environment, and the AER are updating their cost of debt that they're incorporating that into their calculations.

But coming back more broadly to financing transmission, once transmission projects go into the regulated asset base, they are often financed by senior debt. In the privatised states of Australia, and in other states of course, they're government owned—Powerlink for example, and of course in WA. If the question is, 'Are we expected to use concessional finance to help with Rewiring the Nation?' I think the answer to that is yes. There will be considerable use of that. The expectation would be that you would need to use concessional finance in some of those projects.

**Senator VAN:** It's a shame.

**Senator ROBERTS:** You told me in the answers to questions on notice that you've done the analysis. Now you're telling me that we can only speculate on what those businesses are receiving in terms of subsidies that contribute to your returns. What is it?

**Mr Learmonth:** I guess I'm just trying to use some examples to try and flesh out what you mean by subsidies. Are they subsidies that are being provided to our borrowers?

**Senator ROBERTS:** Yes. You understand their money streams. What is the proportion of subsidies in there? In other words, the government is paying to help you get a return on your loans.

**Mr Learmonth:** In some cases there are companies we have lent to that are recipients of state government benefits. And for some reason they might—

**Senator ROBERTS:** The point is you're investing in something that needs subsidies to survive, so we've got the government giving money under a loan and then relying upon other subsidies, from the same taxpayers—maybe state, maybe federal—to get a return back.

**Mr Learmonth:** Just in terms of wind and solar, even if you backed out the subsidy around the generation certificate, they would in most cases still be able to pay their debt. We don't come up with the subsidies. We are there looking at projects and companies—

**Senator ROBERTS:** I'm not accusing you of coming up with the subsidies. I'm saying that your borrowers cannot pay it back without those subsidies.

**Mr Learmonth:** I don't think that's right.

**Senator ROBERTS:** Could you give me the figures that show that, please? You've said you've got the analysis.

**Mr Learmonth:** The only borrowers that we have where a part of their direct revenue source or generation may have some form of government subsidy is probably wind and solar, because they are recipients, but there are other ones that have no government subsidies.

**Senator ROBERTS:** Let's move on to something that's associated, because you don't know the income streams. I also asked you in Senate estimates, on notice, what the risk to wind and solar investments was from a change in government policy. You didn't answer what the risk was. You just said that you have assessed the risk, like any prudent investor. I asked:

Political risk is one of the most basic elements of a assessing a business case. What is the risk to wind and solar investments if the government were to abandon their net-zero policy?

Which some jurisdictions around the world are discussing right now. The answer I got was:

The question is a hypothetical but suffice to say, like any prudent investor, the CEFC undertakes due diligence into risks to any revenue stream, and structures its investments to ensure that it is not unduly exposed to risk, including policy risk.

If you have assessed the risk, what is the risk?

**Mr Learmonth:** What is the risk of a government abandoning—

**Senator ROBERTS:** Financial risk—what is the risk to your loan?

**Mr Learmonth:** It's hard to speculate. We would look—

**Senator ROBERTS:** But you've assessed it.

**Mr Learmonth:** Yes, because we would have looked at it and we would have gone: What sort of generation would this wind or solar farm produce? Do we estimate that power prices over the term of our loan—it might be five years; it might be seven years—will introduce some element of risk to those cash flows? And then we would have looked at whether or not our debt could be paid back. If a future government changed policies around net zero, it would take some while before that potentially would have any impact. I think it's not a risk that we would be factoring into it, because we're looking at the more immediate and realistic options.

**Senator ROBERTS:** You've said you've done your due diligence but you can't put a handle on the risk. I put it to you that the government abandoning net zero targets would be catastrophic for your investments. Without targets, there are no subsidies, and the generators couldn't produce a return and pay back the loan.

**Senator McAllister:** Senator Roberts, I think the problem with the line of questioning you're pursuing with Mr Learmonth is that you assume that investments in the National Electricity Market are driven by subsidies, which you have not identified. All over the world renewable energy is increasing because of its technological advantages and because of the cost profile of alternatives—

**Senator ROBERTS:** Hydrocarbons after—

**Senator McAllister:** May I finish?

**Senator ROBERTS:** Yes.

**Senator McAllister:** Particularly where either the overall demand in an electricity system is growing or assets need to be replaced. I think you have repeatedly mischaracterised Mr Learmonth's answers to you and then put the question back to him in a form that misrepresents the position he has just put to you. To be fair to the officer, he is doing a good job at describing to you the processes that the CEFC go through in examining investment opportunities.

**Senator ROBERTS:** Well, combining what you've said—

**CHAIR:** Senator Roberts, I'm going to have to make this your last question.

**Senator ROBERTS:** I'll move on. I note that, as you said in those same answers, you don't screen any investments for connections to political donations. Don't you think that some basic due diligence is needed? Shouldn't you be bringing it to the attention of the minister if you are about to give a company hundreds of millions of dollars and it has made a political donation?

**Mr Learmonth:** We undertake very significant due diligence on all our borrowers or investee companies. We would look at whether there was some overt political connection—

**Mr Every:** We're actually required to under the AML/CTF laws, the anti-money laundering and counterterrorism financing laws. We are required to identify politically exposed persons, and that is part of the due diligence.

**Senator ROBERTS:** Senator McAllister, in response to your comments: the world has globally invested trillions of dollars—I think the figure may be \$150 trillion, but I may be wrong on that—and the share of energy used on the planet from hydrocarbons has gone from 82 per cent to 81 over the last 10 to 20 years, despite trillions of dollars going into solar and wind.

**CHAIR:** I'll take that one as a comment.

**Senator ROBERTS:** Yes. It's not a question; it's a fact.

**Senator CADELL:** I have some odd hearing things that I'll just clarify if that's okay. Mr Learmonth, you said in an earlier question that you think 70 per cent of your funds is out of your loan book. Is that right?

**Mr Learmonth:** I'll see if I can get a more precise answer, but it's around that.

**Senator CADELL:** Is the other 30 all equity?

**Mr Learmonth:** That's right. We are either lending money or we're making minority equity investments.

**Senator CADELL:** That's good, because I think earlier you said to Senator Waters that there are some equity positions taken—not a lot; that's 30 per cent of your book, right?

**Mr Learmonth:** Yes, 30 per cent—ballpark.

**Senator CADELL:** Point 2: how much have you had to write off over the operation of the fund so far—if any—and is there any provision for doubtful debt on your balance sheet?

**Mr Powell:** In both those cases, yes, there have been two write-offs that we have done over the 10-year life of the fund. One was for just under \$800,000, and the other was for close to \$52 million.

**Senator CADELL:** \$52 million?

**Mr Powell:** Correct.

**Senator CADELL:** That one hurt more.

**Mr Powell:** That's over having invested \$12 billion over the 10-year life of the fund—so it's those two amounts. In terms of what we've got in provision at this point, we always carry a statistical provision. We do it on the conservative end because we have concentration in our portfolio that is much more concentrated than, say, the banks, where they're predominantly lending to housing. In our case, we are providing \$150 million in round numbers for potential issues in the portfolio.

**Senator CADELL:** But that's not individual client-linked projects; that's statistically linked.

**Mr Powell:** It's statistically linked. We'll provide a little bit more for something that we think has a little bit more risk, but we've only been going for 10 years, so statistics are what we rely on.

**Senator CADELL:** Things are happening there. There was an earlier question from Senator Hughes, who's not here at the moment, about the Hydrogen Headstart. You are taking a role in that going forward, I think. Is that right?

**Mr Learmonth:** We'd anticipate supporting it, not necessarily playing a direct delivery role in it.

**Senator CADELL:** No, it would be the wrong question, so that's fine. I won't go there. Thanks very much.

**CHAIR:** Thank you very much. I appreciate your time. Thank you so much for coming and sharing your experience and knowledge with us. We will now excuse you and go to a tea break already.

**Proceedings suspended from 20:28 to 20:45**

**Snowy Hydro Limited**

**CHAIR:** We will just table the document referred to earlier in questioning from Senator Hughes. I would now like to welcome officers from Snowy Hydro Limited. Welcome, Mr Barnes. Would you like to make an opening statement?

**Mr Barnes:** Yes; I will make a brief opening statement.

**CHAIR:** Fantastic. Thank you.

**Mr Barnes:** Thank you for the opportunity to provide an update to the committee. I know you'll be keen to discuss the recent update we provided in relation to the completion time line for Snowy 2.0 as well as other matters.

We recently announced a 12- to 24-month delay from the previously expected commencement of commercial operations. Since coming on board, my goal was to review the status of this nationally significant project, and it quickly became clear to me that it needed to be placed back on a footing that reflects the challenging realities for major construction projects. Clearly, we would all prefer the project to be delivered as soon as possible; however, my priority in this role is to be realistic and transparent and to establish relationships on a strong foundation of credibility and trust. We are resetting in this way to provide clarity to all stakeholders and enable appropriate planning for the National Electricity Market. The update will place the project back on track so it can be delivered in a safe, effective and economically sustainable manner.

As we announced in May, a number of factors have contributed to these changes in the cost and schedule of Snowy 2.0. Taken individually, each of these factor could have been managed within the project contingencies; however, the combination of the four factors at the same time has driven this requirement to reset the project. Importantly, our overarching objective of the reset is to drive performance by implementing learnings derived from the last few years of construction. We will continue to work with our delivery partner, the Future Generation joint venture, to assess the required adjustment to project costing and we'll provide an update once that is available, which we expect to be later in the year.

Finally, I would also like to emphasise that positive progress on the project does continue, including completion of tunnelling to the underground power station, giving us access to this site from both ends, and good progress on the excavation of intakes at the Tantangara and Talbingo reservoirs. Thank you again for your time this evening.

**CHAIR:** Thank you very much. We will go to Senator Waters.

**Senator WATERS:** Hello, Mr Barnes and Mr Whitby. Thanks for joining us tonight. I will start where you left off, with a question about the tunnel-boring machine to dig for Snowy 2.0. I understand there is a 17 kay journey that the machine needs to make. How far has it gone since it started in March last year?

**Mr Barnes:** It's gone in the order of 70 metres—or no further since our last appearance.

**Senator WATERS:** How much has that cost to date?

**Mr Barnes:** There's no specific cost for the tunnel-boring machine stand-alone.

**Senator WATERS:** How is that?

**Mr Barnes:** The whole project has a cost base. I don't have the number in my head how much we've spent to date.

**Senator WATERS:** Perhaps you could take that on notice for me, please.

**Mr Barnes:** Yes, of course.

**Senator WATERS:** What were the original schedule dates for commissioning each of three tunnel-boring machines and for completion of their respective excavations?

**Mr Barnes:** I don't have that detail via machine. Obviously, the dates I'm focused on are the first power and the commercial operation of the power station. The tunnel-boring machine are subsets of that. I don't keep that level of project detail in my head.

**Senator WATERS:** Can you take that on notice for me, please?

**Mr Barnes:** I will take it on notice, but it may also not have been specifically determined at the FID point.

**Senator WATERS:** Okay. I would be interested to know if that's the case as well. Thanks for taking that on notice. Can you recall the latest schedule dates for each of the machines to complete their respective excavations? Can you recall the latest schedule dates for each of the machines to complete their respective excavations?

**Mr Barnes:** The three machines actually perform a number of roles. One of the tunnel-boring machines has completed already the main access tunnel and is being reconfigured to complete the tail race intake. The second machine has completed the ECVT tunnel, the emergency communications and ventilation tunnel, and that's been reconfigured to complete the incline pressure shaft, which is a 1.8 kilometres tunnel, and for the tunnel-boring machine Florence—obviously, given the variable ground conditions we have until we get it restarted—there's a completion date assumed in the project schedule, and it's about three years from restarting the machine. But, of course, the critical path on a project does move around during the life of a project, and the main focus is the production of electricity at the end.

**Senator WATERS:** Three years from restarting it. Why?

**Mr Barnes:** That's the normal progress of a tunnel-boring machine doing a 15-kilometre tunnel.

**Senator WATERS:** That's just how long it takes?

**Mr Barnes:** Yes.

**Senator WATERS:** Would you describe the three machines as behind schedule?

**Mr Barnes:** Clearly, the tunnel-boring machine Florence, which is at Tantangara, is behind schedule, and is now the critical path item for the project.

**Senator WATERS:** Why is that?

**Mr Barnes:** It encountered soft ground in advance of our expectations, and a surface depression appeared above the tunnel-boring machine. We've taken the time since that emerged in December to strengthen the area in front of the tunnel-boring machine and stop the depression getting further depressed and also to procure and construct a slurry machine, or a machine that will effectively liquidise the soil in front of the tunnel-boring machine, enabling it to move forward. That wasn't expected at this stage, so that's taken since December to construct, and that's due to commission at the end of May.

**Senator WATERS:** Can I now ask some questions that might be better directed to you, Mr Duggan, about the component payments made to your predecessor, Mr Broad, on his resignation? What were the nature and the amount of those payments made and their justification?

**Mr Duggan:** I don't have the information on the termination payment in front of me.

**Senator WATERS:** Is there someone who can get that information for you?

**Mr Duggan:** We'll have to take it on notice.

**Senator WATERS:** You took it on notice last time, and I was kind of hoping it might get an answer this time. If there's any further light you can shed at all at this present moment, that would be much appreciated.

**Mr Duggan:** I don't know. We don't have that information, sorry. We'll have to take that on notice.

**Senator WATERS:** Can I ask in the broad—and no pun intended—why Mr Broad was provided with a termination payment?

**Mr Duggan:** Again, I simply don't have that information in front of me, so I'm not in a position to answer that question.

**Senator WATERS:** Again, is there someone in the adjacent room that has that information?

**Mr Duggan:** No, Senator.

**Senator WATERS:** Why don't you have that information?

**Mr Duggan:** Mr Whelan and I are the officers here able to answer Snowy questions. There's no-one else here to answer those questions.

**Senator WATERS:** I'll persist nonetheless, as hopefully you can shed some light on some of it. Would there have been a difference in separation payments for a resignation as opposed to a termination payment?

**Mr Duggan:** Again, I'll take that one on notice.

**Senator WATERS:** How does the remuneration package for Mr Barnes compare with the package for Mr Broad?

**Mr Duggan:** Mr Barnes, in terms of his remuneration, comes under the Remuneration Tribunal. Basically the tribunal made a recommendation of fixed pay of \$1.75 million and a performance pay component of 40 per cent under the tribunal's PEO band E classification, so that's in line with other government business enterprises. Mr Broad essentially was on a more complicated remuneration package, but, in broad terms, adding base salary fees, short-term variable pay, superannuation, long-term variable pay and long-service leave, his pay was in the order of \$2.75 million.

**Senator WATERS:** Could you please provide for me on notice the breakdown of those components, and perhaps also an explanation as to why there's such a difference and, as you described it as complex, why it was such a complex arrangement for Mr Broad?

**Mr Duggan:** All the figures I just read out for Mr Broad are in Snowy Hydro's annual report, but I'm happy to provide that on notice.

**Senator WATERS:** Okay. Perhaps the bit that won't be in there is why it is significantly different to Mr Barnes's remuneration. Can you provide that for me on notice, please?

**Mr Duggan:** I can. As I said, that was a decision of the Remuneration Tribunal, so they took into account all relevant factors in setting Mr Barnes's performance consistent—

**Senator WATERS:** Did they also set Mr Broad's rate?

**Mr Duggan:** I'll need to take that on notice. That was well before my time in the role.

**Senator WATERS:** I'm interested in any points of difference between the two, including who set the amount. Thank you.

**Mr Duggan:** Okay. I'm happy to take that on notice.

**Senator DAVEY:** Thank you, gentlemen, for appearing, as usual. I want to come back to poor Florence. She's been stuck for quite a while now, hasn't she? She has been stuck for—I want to say seven months.

**Mr Barnes:** Since 12 December, I think was the date.

**Senator DAVEY:** You said that, on restart, it'll take her three years to complete the job. Have we got any indication of when restart may be, because, if it is another six months before she restarts, we're talking 3½ years before completion. If it's another year before restart—are we getting any closer to a restart?

**Mr Barnes:** I'll clarify my three years and say it is in the order of three years. Obviously, it's a function of the ground conditions that we encounter. The precondition for restarting is to ensure that the area in front of the machine is strengthened, and we've all but completed that. The other precondition is the completion of the slurry plant, which essentially allows the tunnel-boring machine to move forward in a pressurised, liquefied sand mode. That slurry plant is commissioning at the end of the month, and then we should be able to push forward with Florence shortly thereafter.

**Senator DAVEY:** Excuse my ignorance, but how do you get the slurry plant in front of the borer when the borer is stuck?

**Mr Barnes:** If you picture a very large 211-metre machine in the hole, one side of the tunnel-boring machine has a conveyor belt which takes out rock, if we hit rock, and the other side has a series of pipes. That puts into the front of the machine some bentonite and slurries the sand, and then takes the slurry material out, sends it to a whole heap of settling plants outside the tunnel, and then it goes in a closed loop. It runs on a pipeline system. The slurry plant is the size of a sports stadium, so it's a relatively big piece of kit.

**Senator DAVEY:** That you've had to procure. So that was not an expected cost for the project. Have you got any indication of what the procurement cost of the slurry—

**Mr Barnes:** No; it was an expected cost and it was included in the budget. It just wasn't expected to be needed so soon.

**Senator DAVEY:** So it has been brought forward?

**Mr Barnes:** Yes.

**Senator DAVEY:** Is Florence leased?

**Mr Barnes:** That's a good question for Mr Whitby. Is Florence leased or do we own it?

**Mr Whitby:** It's procured by the joint venture partner.

**Senator DAVEY:** So they own it?

**Mr Whitby:** Well, ultimately, it becomes the property of Snowy Hydro.

**Senator DAVEY:** You said in your opening statement—and it's been reported—that we're looking at a 12- to 24-month delay at this stage, but we have no indication of what additional costs come with that delay. So, whatever the agreement with your joint venture partner on the capacity to use Florence and her two friends—I love that they're named—if it is all extended, though I don't know if her two friends get to finish and go home while Florence is still stuck underground, where will the additional costs that are going to come because of the delay come from and what will they be attributed to?

**Mr Barnes:** In our announcement we cited four factors. One was the impact of COVID and bushfires affecting the mobilisation of the project. No. 2 was the global impact of labour availability and commodity cost increases. No. 3 was some design elements which weren't as complete a fit, as we have now determined. The fourth one was the site conditions—not just Florence sinking but also the need for additional roads and the like. Some of those four factors will have schedule only impacts. Some will have cost only impacts and some will have schedule and cost. So it's quite a complicated web which we'll work through over the next few months.

**Senator DAVEY:** Was the sinkhole that effectively appeared in front of Florence due to site conditions and design elements?

**Mr Barnes:** It would be site conditions in those four categories.

**Senator DAVEY:** Has a complete geological survey been done post the sinkhole to ensure that we're not going to run into similar problems as Florence continues?

**Mr Barnes:** Prior to the financial investment decision, there was in the order of \$100 million spent on geotechnical surveys. So we feel we have good coverage of the site. We are obviously looking at all sorts of ways to mitigate the scheduled delay. Once you get the tunnel-boring machine going, you can do imagery technology in front of the tunnel-boring machine and go around any significant issues. But, in slurry mode, we have less of an issue because it can move from hard rock to soft material. There's a little bit of changeover time but it is much less of an issue.

**Senator DAVEY:** So, with \$100 million worth of geological surveys, we still encountered a massive sinkhole—I'm told it's like nine metres in diameter—and Florence is stuck 70 metres below the surface?

**Mr Barnes:** Yes.

**Senator DAVEY:** No egg on those geologists' faces! Hopefully, she will finish at Tantangara. So you've already got the intakes or entrances at Tantangara and Talbingo complete?

**Mr Barnes:** No; the intake structures are not complete, but the two main tunnels that access the cavern are complete. The intake structures are in progress. To give you a sense of the project, there are obviously two intake structures, three tunnel-boring machines, a very large cavern to excavate and also a surge shaft which sits at a place called Marica. Lots of those machines are making good progress.

**Senator DAVEY:** So the main delay is Florence and then there are the flow-on effects?

**Mr Barnes:** Yes, and the critical path, we would have said six months ago, was the excavation of the cavern for the power station and transformer hall. But the critical path will move on a project of this complexity. I have stated publicly we are looking at ways to mitigate the impact of the Florence delay, including accessing the headrace tunnel from the other end, but that's obviously a significant undertaking to consider. So we will look to derisk the schedule where we can.

**Senator DAVEY:** Did you say when we can expect the updated costings?

**Mr Barnes:** We're expecting later in the year as part of our corporate plan process.

**Senator DAVEY:** Moving on, I'll leave poor Florence underground at the moment.

**Mr Barnes:** I have visited her a number of times, and she's doing well.

**Senator DAVEY:** That's good, because I do feel for her. Mr Whitby, when is the next review of the water licence due?

**Mr Whitby:** I think, off the top of my head, the last review was in 2018, and there's a legislated 10-year review process, so 2028.

**Senator DAVEY:** Mr Whitby, can you just give us a very quick—as I always ask you at estimates—overview of the water storages, water holdings and—as you are very used to doing by now—associated, and just an understanding of the required annual release for both the Murrumbidgee and the Murray and how things are looking up there water-wise?

**Mr Whitby:** Yes, sure. Overall, we've just completed the water year, which ends on 30 April. We complied with all requirements under the water licence. In terms of our overall storage levels, we're at approximately 60 per



cent storage. Last water year was the wettest in terms of inflow since 1974-75, so it was a very wet year. This year, in terms of outlook, all the forecast models and the forecasters are predicting a drier outlook. So we're in the fortunate position of having reasonably full storages, but the outlook is somewhat drier.

**Senator DAVEY:** I think it was at the last estimates that I asked you if any of your operations would have exacerbated the flooding events. As you said, it was the wettest year in decades, particularly in the Murrumbidgee. It has since been put to me that Snowy did actually request permission to exceed channel capacity to increase releases. You wrote to the New South Wales water minister. Was that request accepted?

**Mr Whitby:** No, it wasn't. We did request that of the New South Wales energy minister. That was in relation to the energy crisis, which I think we've spoken about previously. But obviously there were very critical supply shortages which were occurring, ironically, from about this time last year. That was in the context of a very wet catchment, so we were somewhat constrained, but so was the power system. So we were looking at ways of managing that situation.

**Senator DAVEY:** This is a critical point because releases from that particular dam, Blowering, are limited because of the natural capacity of the channel into the river, and exceeding that capacity causes localised flooding. But last year the natural flooding events that were occurring across the Murrumbidgee and the Murray—I'm not sure exactly about the timing of your request, but it was certainly a very wet catchment.

**Mr Whitby:** Indeed.

**Senator DAVEY:** It begs the question: what is the priority? Is the priority energy supply and security, or is the priority dam safety, river safety and structure safety?

**Mr Whitby:** Ironically, the very request that we were making of New South Wales was to make higher low-level releases in order to avoid the risk of the potential for a lower-probability but much higher-consequence high-level flood. We were actually looking to reduce that high-consequence risk.

**Senator DAVEY:** Had that request been granted, what would that have meant for your water releases, and what bucket of Snowy water would it have come from for accounting purposes? Would it have come from required annual release, which might have seen you exceed the annual release for that year? Would it have been a pre-release from next year or would you have, very reluctantly, relinquished some of your above-target water?

**Mr Whitby:** Excellent question. There is an airspace deed, which I think you're probably aware of, between Snowy Hydro and New South Wales. We have the right to nominate an airspace provision. To the extent that that is required to be targeted, New South Wales makes pre-releases to honour that deed and, in return, we underwrite it with above-target water so it doesn't, in effect, compromise required annual release.

**Senator DAVEY:** So we can reassure the irrigators along the Murrumbidgee scheme that their required annual release for the next water year won't have been impacted by last year's energy crisis?

**Mr Whitby:** Correct.

**CHAIR:** I am extraordinarily tempted to ask you what you call the other two machines—'Florence's friends', as has so neatly been coined by Senator Davey. Have you named them?

**Mr Barnes:** TBM Kirsten and TBM Lady Eileen Hudson.

**Senator HUGHES:** Come on!

**CHAIR:** Come on, indeed! We could all start singing around about now. Senator Roberts.

**Senator ROBERTS:** Thank you for appearing again today. Florence is now acknowledged to be bogged. When will it be unbogged?

**Mr Barnes:** I expect in weeks, not months. As soon as the slurry plant is operating, we'll push forward, obviously in close consultation with our colleagues at DPIE and Parks, but we expect it to be relatively soon.

**Senator ROBERTS:** I empathise with you, having managed underground projects, some quite large—not as large as this one. There is a lot of uncertainty, and it's hard telling people who are looking on how to think about this. It's very difficult to describe.

**Mr Barnes:** You've got to see it to believe it.

**Senator ROBERTS:** That's right. We've got journalists—admittedly journalists—now saying it's time to cut our losses on Snowy 2.0. If the project is completed and all the high-voltage transmission lines are built across farmyards and national parks, there must be a calculation that takes the capital cost of the project as a whole and divides that by the life of the project to get a figure for how much the annual amortisation charge for the capital costs will be. Do you have the latest projection, please?

**Mr Barnes:** There was quite a lot in your question. Obviously we haven't got an updated cost here, and we'll provide that in months. We don't have the cost of transmission, so I wouldn't be able to provide that. I fully expect, through our corporate plan process, we'll assess the returns from Snowy 2.0, and, if anything, the commercial case for it has got stronger since FID.

**Senator ROBERTS:** Sorry?

**Mr Barnes:** The commercial case for it has gotten stronger since the financial investment decision.

**Senator ROBERTS:** There were many factors that drove that commercial decision in the first place. Well, it wasn't commercial, from what we understand, because there was no cost-benefit analysis, and the business case was redacted heavily, under Malcolm Turnbull's prime ministership. This annual amortisation charge, which you can't provide, is combined with annual costs like labour and maintenance to calculate what the real cost per megawatt hour will be once the project starts. You wouldn't have the projected cost per megawatt hour either then?

**Mr Barnes:** That's correct, but to think about Snowy 2.0 in megawatt hours is perhaps not the right way to think about it.

**Senator ROBERTS:** It's a battery.

**Mr Barnes:** Yes, but it's the provision of dispatchable demand over very long storage duration that allows lots of variable renewable electricity to be delivered. So we look at the business case in a much more fulsome way across the whole Snowy business. For example, over the past few years, we've procured 1,500 megawatts of solar and wind PPAs to enable the transition, which assets like Snowy 2.0 support. I think you've got to look at a whole-of-business business case, and the simple amortisation plus labour is, perhaps, too simplistic a way to consider the business case.

**Senator ROBERTS:** Now you've got me really worried. It's not your responsibility with the solar and wind, but now I'm terrified of it. Your website lists the levelised cost of storage at between \$25 and \$35 per megawatt hour. On 340,000 megawatt hours each year, this suggests an annual cost of \$11 million, including operating costs, maintenance, capital costs and the cost of buying the electricity to pump the water uphill. Is the \$25 to \$35 figure still accurate and, if not, what is the new figure?

**Mr Barnes:** I've not got a calculator that capable in my head, but I think there might be a multiplying factor out on those numbers. The levelised cost of storage I think we have on our website is sourced from international studies and our view of levelised cost of storage. I don't have the updated figure in my head at the moment.

**Senator ROBERTS:** Our staff team did some calculations. Now, admittedly, we don't have all the costs, but it just seems ridiculously low. When we pile on these extra costs of the delay, we're wondering about what will happen.

**Mr Barnes:** Just to be clear, the levelised cost of storage is what one would add to variable renewable electricity to provide a firm product. Also, the 340,000 megawatt hours of storage is not deployed over a year. It will be deployed multiple times through the year, depending on the market dynamics.

**Senator ROBERTS:** It seems to us that the capital cost is becoming a huge stumbling block. Even if you take just the cost of the project, at \$6 billion—and there are serious doubts about that now—and amortise those across 50 years, the annual capital charge will be \$120 million, and double that if you add the pole and the wires. That puts the cost of your electricity at over \$700 per megawatt per hour, including the poles and wires. The current spot price for last weekend—admittedly the weekend was cold down here—for last weekend was \$150 per megawatt hour. Is there something we're missing?

**Mr Barnes:** We'll certainly do a full financial review of the project when the increased costs are known. But I think you're mischaracterising the nature of the asset in that it isn't an energy provider. It's an insurance provider for when the wind isn't blowing, the sun isn't shining or there is plant failure elsewhere. So we don't sell it as a baseload energy price, which is what you're referencing.

**Senator ROBERTS:** Hasn't it been touted as a peak period source of electricity?

**Mr Barnes:** The two major sources of revenue will be the difference between the price we pump the water up to Tantangara, which will soak up demand from solar and wind when it's not required, and the price at which we sell it in peak periods when solar and wind aren't available or other plants are not available. So it's an asset about being there when everything else isn't. It isn't sold on an energy basis, which are the reference prices you're quoting.

**Senator ROBERTS:** Okay. But the projected cost must be the single most important KPI of this project.

**Mr Barnes:** Cost and schedule are my most important KPIs. The reason we came out with the schedule is that there are many stakeholders interested in the schedule, and we'll work through the cost and associated business plans around that.

**Senator ROBERTS:** There seems to be a real risk, though. I acknowledge your point that we can't just charge per kilowatt hour—or we can't just recognise a per kilowatt hour figure. But there seems to be the real possibility that the price of electricity generated, recovered and stored will be massive, even without government subsidies coming in year after year.

**Ms Barnes:** I think that's for others to comment on. My focus is on getting the project at schedule and cost and making a business case for it, which I think is very strong. There are many other factors which will determine the price of electricity.

**Senator ROBERTS:** Minister, can you provide on notice the current projected cost per megawatt hour of electricity generated by Snowy 2.0 on the first year of operation, please?

**Senator McAllister:** Senator, I will take that on notice. I would also direct you to the evidence given to you already by Mr Barnes in relation both to the variability in the electricity market that Snowy will participate in but also—

**Senator ROBERTS:** A lot of variability means uncertainty.

**Senator McAllister:** Senator Roberts, I think that Mr Barnes has given an indication that he thinks it's a strong business case and they're presently working through it. I have taken your question on notice.

**Senator ROBERTS:** Thank you. This had nothing to do with your government, but right from the start of this project, Malcolm Turnbull's government refused access to the cost-benefit analysis and heavily redacted the business case. There have been lots of questions about this project right from the start and now there are even more questions—and I don't blame Mr Barnes for that.

**Mr Barnes:** My interest is running a commercially viable and efficient company, and that's what I've done all of my career. The reason I joined Snowy was to get the opportunity to deliver Snowy 2, because I think it's an incredibly important asset to the energy transition. I fully expect it to be very commercial. We're trying to deal with the hardest part of the transition, which is providing deep storage to enable more renewables. So I expect it to be a very commercial business.

**Senator ROBERTS:** Can I confirm media reports that Snowy Hydro was found in a third independent audit last year to be noncompliant on environmental plans in 15 instances and that you have at least 10 management plans overdue?

**Mr Barnes:** I think, Senator, that you're maybe referring to a National Parks Association report that was released last Thursday, without consultation with Snowy Hydro. We are currently operating under all of our construction approvals. So there are no breaches there. The plans and requirements as a result of the construction and operation of Snowy 2 obviously changed in nature over time. There are some that are relevant to construction, and we're fully compliant with those. There are some that are relevant to operation and some that are relevant to rehabilitation. We work closely with all of the agencies to make sure that they're reviewed and consulted on in a very thorough way. I think there's been a misunderstanding of some of the dates on various websites. So I have reached out to the National Parks Association to help them understand how it operates.

**Senator ROBERTS:** So it's a misunderstanding that 10 of the 16 management plans for multibillion-dollar pumped hydro projects are overdue by 31 months, as reported in the media, citing the National Parks Association? So you think they've got it wrong somewhere?

**Mr Barnes:** The plans that are being referred to are prepared by Snowy and they are reviewed by various agencies. In consultation with the agencies, some of the dates that were originally envisaged are not being met and, therefore, are phases of the project which are way into the future. One of the things that may be useful for us to do is to work with the various agencies to make that understanding of how this process works. I would have happily taken the National Parks Association through that process.

**Senator ROBERTS:** Okay; so they jumped the gun?

**Mr Barnes:** They didn't consult with Snowy Hydro before releasing it to the media.

**Senator ROBERTS:** Can I go to your opening statement? You recently announced a one- to two-year delay. That's a heck of a range, 100 per cent—from minimum to major.

**Mr Barnes:** It's a project that's being constructed over more than one to two years. It's been in construction a few years. I think it was appropriate to give a range until we do more work.

**Senator ROBERTS:** I appreciate your honesty. I am not questioning your honesty—and I appreciate that you have given us that figure. But, for the project, that's a pretty big number. What was the original planned project duration?

**Mr Barnes:** It was before my time. Perhaps we'll come back to you. We gave a notice to proceed in mid-2020 and power was expected in 2025-26.

**Mr Whitby:** First power was for 1 July 2025, from a notice to proceed from August 2020. So five years was the original—

**Senator ROBERTS:** So the delay is 20 per cent to 40 per cent?

**Mr Barnes:** That would be the simple maths.

**CHAIR:** Senator Roberts, I'll get you to wind it up and share the call, if that's okay?

**Senator ROBERTS:** Okay. You mentioned in your statement the combination of four factors. What are the four factors? I've been through your statement and I couldn't see them.

**Mr Barnes:** In our advice to ministers and in our media release we identified the effects of COVID and bushfires on the mobilisation of the project, the effect of many global factors on the availability of skilled labour and also the costs of materials. There's a lot of steel and concrete in the project. We've found that some elements of the design—as we've gone through the process of design—are, in some cases, more costly to complete. And finally, the site conditions, of which the Florence ground conditions are the most impactful, also includes things like additional eroding. They're the four factors.

**Senator ROBERTS:** Good luck getting that machine out.

**Mr Barnes:** Thanks.

**CHAIR:** Senator Cadell?

**Senator CADELL:** I understand the new business cases for Snowy 2.0 is undercatered. Later this year we'll get those numbers. I understand the original budget was \$5.9 billion. Is that correct?

**Mr Barnes:** That's correct.

**Senator CADELL:** Are we factoring in—or is it way too early to speculate—a percentage increase? Or do we just know it will increase?

**Mr Barnes:** I fully expect an increase but it is far too early to speculate.

**Senator CADELL:** The original contract was a fixed-base performance contract. Is that still the contract for construction with the joint venture partner?

**Mr Barnes:** That's the current contract, yes.

**Senator CADELL:** That's the current contract. There's no change to that?

**Mr Barnes:** As part of the reset we will probably look at mechanisms to amend the contract to drive better performance.

**Senator CADELL:** We're not staying on a fixed-base performance contract? Will it be cost plus? What will it go to?

**Mr Barnes:** I think there will be some element of fixed-base performance in the contract. The EPC contract we have will form the base of the contract, but I believe there will be some elements that we'll negotiate to be of a cost plus nature. The industry lingo on it is to refer to incentivised target cost.

**Senator CADELL:** I love the lingo, but does that not expose the taxpayer to higher costs? All the risk is now on us as a developer if it's cost plus. Any problem with the we wear?

**Mr Barnes:** I think it's the opposite, in that the current contract structure is obviously not one which is driving stellar performance. An incentivised target cost model is likely to form a more collaborative venture with us as a client, and probably save the taxpayer money.

**Senator CADELL:** How far are we along with progressing the contract changes?

**Mr Barnes:** We would look to finalise those in time for our corporate plan submission, so we're looking at the next two to three months.

**Senator CADELL:** Interesting. Going forward, you've given this range of dates when it will be first power, 12 to 18 months before that. That would put—best case scenario—December 2028 commercial. Eighteen months before that is mid-2026. Do you think that's possibly achievable or do you think that's the best case exposes a bit too much to look at?

**Mr Barnes:** Obviously we're working through the detail but one of the reasons we gave a range on first power to commercial operation is that the commissioning process can be expedited with the right mindset and collaboration on the project. It would be great to get a 12-month commissioning program. We're working through all of these at the moment. The range of dates I gave are the current best estimate.

**Senator CADELL:** It's going to take three years from freeing Florence—that's mid-2026 to get Florence to the other end?

**Mr Barnes:** That's why we're looking at potential mitigants, and it's an awfully complex point but you can do a lot of dry commissioning of the machine without the head race tunnel being complete.

**Senator CADELL:** Moving on to my other favourite topic of Kurri Kurri, which is from my patch of the world. In early December and before previous estimates we pushed that date back another 12 months as well. We've got a question on notice answer, which was just given to us now, where the website change—I think Senator Grogan asked this question in the last one—is up to 15 per cent hydrogen now instead of the 10 per cent that was on the website? Is that because we've purchased a different type of generator than the original plans, or has the generator just upped spec? What's the change from 10 to 15?

**Mr Barnes:** It's just a greater understanding of the machine we bought.

**Senator CADELL:** Right, good to know. Originally, with some minor additional investment, it will be capable up to 30 per cent. You were doing the business case on that the last time we spoke. Is that business case done?

**Mr Barnes:** No, we're still working through that with shareholder departments. The next phase is to do a study with Mitsubishi Heavy Industries on the tri-fuel, because the plant already operates on gas and diesel, and it will look at whether we can operate on hydrogen as well at 30 per cent. We expect to finish that in the middle of the year.

**Senator CADELL:** So not that far away?

**Mr Barnes:** No.

**Senator CADELL:** What's the current budget for the Kurri Kurri project to be delivered with 15 per cent via turbines?

**Mr Barnes:** I think the most recent advice released by the minister's office was \$765 million, and it's still within that range.

**Senator CADELL:** Since January, there have been no other blowouts? We're still confident of that time frame? We're not putting ranges on that at this stage?

**Mr Barnes:** No, we're still looking at mid next year for commissioning, with December 2024 as completion. If anything, since you would have been at the site, Senator, there has been a hell of a lot of progress. We've two concrete slabs in place and a lot of rebar and equipment at sites, so all we've seen is progress since then. It's stopped raining, so it's made it a little bit easier!

**Senator CADELL:** Good old Kurri Kurri! The hard question every time is: have we yet contracted, sourced or shortlisted a source of green hydrogen for this site to be burning 15 per cent?

**Mr Barnes:** No, I think that's subject to the mid-year business case review and how the industry develops, but we haven't—

**Senator CADELL:** You're not there yet. Okay, that's all I have on that.

**CHAIR:** Anybody got any final questions? No, okay. Mr Barnes, thank you very much for coming along.

**Mr Barnes:** Thank you.

**CHAIR:** We appreciate your time. We will now release you from this delightful experience.

#### **Australian Renewable Energy Agency**

[21:31]

**CHAIR:** I will ask officers from the Australian Renewable Energy Agency to come forward. Mr Miller, do you have an opening statement that you would like to make?

**Mr Miller:** I do. I would suggest, in the interest of time, I just do an abridged version of that—

**CHAIR:** And just table it?

**Mr Miller:** and table the rest.

**CHAIR:** That would be fantastic. Thank you very much.

**Mr Miller:** No problem. Thank you to the committee for the opportunity to appear here today on behalf of ARENA, the Australian Renewable Energy Agency. I'd like to begin by acknowledging the traditional custodians of the land on which we are gathered today, the Ngannawal and Ngambri people, and pay my respects to elders past and present.

As you will have seen, ARENA has been allocated \$4.2 million in this year's budget to support the development and operation of the new Hydrogen Headstart program, working in close collaboration with the Department of Climate Change, Energy, the Environment and Water. This is a new \$2 billion program to support scaling up Australia's hydrogen sector, help capitalise Australia's hydrogen industry and position Australia as a global hydrogen leader. Australia has an unparalleled opportunity to become a global leader in green hydrogen, but we can't afford to lose our momentum as other competing countries step up their ambitions and support.

With this funding program, Australia is looking to incentivise green hydrogen production in Australia by backing early projects that will be among the largest in the world. The program will reduce the cost of green hydrogen produced by renewable electricity, scale up our hydrogen sector, create thousands of regional jobs and help to reduce emissions in industry in line with our climate targets.

Hydrogen Headstart builds on ARENA's existing work in hydrogen and our track record of delivering transformative projects in the energy transition in pursuit of net zero. Having provided more than \$2 billion for over 650 renewable energy projects over the last decade, ARENA is now focused on how Australia can maximise its advantage, renewable energy, to become a renewable energy superpower in a net zero global economy. ARENA is delighted to be involved in the design of this game-changing hydrogen funding initiative. I'll leave it at that for now. Thank you, Chair.

**CHAIR:** Thank you very much, Mr Miller. We will go to Senator Van first.

**Senator VAN:** Thank you for your statement, Mr Miller, and for showing up today. Last week you announced the awarding of your ultra-low-cost solar research program. Is that correct?

**Mr Miller:** We've got an ultra low-cost solar R&D funding round, but that wasn't last week; that information has been out in the public for a while.

**Senator VAN:** Sorry; I might have the date wrong. When was it?

**Mr Miller:** That was announced a number of months ago.

**Senator VAN:** So it was \$41 million in that round?

**Mr Miller:** It was \$41.5 million; correct.

**Senator VAN:** I was interested because, on my analysis—and I am asking tonight to check—out of the 13 successful applicants, eight of the project sponsors were from China.

**Mr Miller:** I haven't checked that, but you might have. I will take your word for it.

**Senator VAN:** Is there any reason why we're backing Chinese projects over Australian projects?

**Mr Miller:** All of ARENA's grant funding is provided to Australian companies. They may have involvement from overseas companies and they may be overseas companies that are set up in Australia. In terms of the R&D projects that you mentioned, all of the funding has gone to three Australian institutions—the University of New South Wales, the Australian National University and one program to the University of Sydney. So I'm not going to confirm your statement about Chinese interests. There are obviously Chinese researchers in many of our universities and we collaborate with China. But all of that funding is to those three institutions.

**Senator VAN:** I wasn't talking about researchers. But you raise a good point: nine out of the 13 projects from the University of New South Wales. It seems—between you and CEFC—you tend to favour one institution over another. I'm not having a go. I'm currently a student of the University of New South Wales, so I'm definitely not having a go at them. But there seems to be a predominance of investment into one particular institution.

**Mr Miller:** Categorically, we do not favour one institution over another. So I will dispel that straightaway.

**Senator VAN:** The numbers would disagree with you?

**Mr Miller:** The numbers are the numbers. We don't favour any institution over another. The projects are judged on their merit. The University of New South Wales happens to be one of the world's premier research facilities for solar PV R&D. By definition, you would expect that they good applications, and they have a huge team. We've obviously provided funding to that number of those projects from UNSW. I note that the University of Sydney is there as well and so is the ANU.

**Senator VAN:** In one or two projects each.

**Mr Miller:** One project for the University of Sydney—more than that from the ANU.

**Senator VAN:** Versus nine for the UNSW.

**Mr Miller:** and more than that from the ANU.

**Senator VAN:** I can check.

**Mr Miller:** There are three projects.

**Senator VAN:** I will go back through that. Would you, perhaps on notice, go back over the last 12 months and do two pieces of work for me: have a look at which projects have a significant Chinese interest and also the range of universities and the frequency of projects that they have been awarded funds for over the last 12 months?

**Mr Miller:** Sure. We will do that for you on notice.

**Senator VAN:** Thank you.

**Senator ROBERTS:** Thank you for appearing today. The latest figures I have about funds committed, as at June 2022, is \$1.86 billion committed across Australia. That is from the 2021-22 annual report. Do you have the most recent figure on what you have committed?

**Mr Miller:** The most recent figure is \$2.15 billion.

**Senator ROBERTS:** It's constantly jammed down Australian throats that wind and solar are the cheapest forms of energy. Why do you have to commit billions in subsidies to wind and solar if this is the case? If they are so much cheaper, shouldn't they be able to survive without your subsidies and just simply beat coal and gas in the market?

**Mr Miller:** ARENA hasn't given much, if any, support to wind projects, in our history. When ARENA was formed 11 years ago, wind was relatively mature and didn't need much support. Solar was an industry where Australia had a research advantage and a burgeoning research community, and ARENA stepped into that space and continued providing research funding to solar.

I think it's entirely appropriate that we aim for lower cost, higher efficiency and more sustainable solar materials. That is what the work that we do supports. In terms of our support for solar, our key program in that respect was in 2016-17 where the intervention that ARENA and the CEFC provided the industry, with \$92 million funding to two large-scale solar projects, drove the cost of that technology down from \$2.50 a watt to \$1.25 a watt following that program to the point where large-scale solar is economic in Australia—and the International Energy Agency says is the cheapest form of electricity generation in history.

ARENA's continued support for solar R&D is to create a sustainable, comparative and competitive advantage for Australia in this important technology, to unlock the potential for solar to be that form of ultra low-cost generation to support a giant iron and renewable steel manufacturing capability in Australia and to provide low-cost energy into our industrial system and to our domestic users. We take that responsibility seriously, and we are very excited by the opportunity to continue to support solar PV research, manufacturing and production in Australia to that effect.

**Senator ROBERTS:** Could you take on notice to explain in depth the cost structures around solar that you are contributing to at the moment, please? In simple terms, the generating of solar is cheap but, by the time we add the doubling or the tripling of the area needed because of the variability in nature and then you add the battery storage, it's very, very expensive.

**Mr Miller:** Senator, I'm not clear what you want me to do.

**Senator ROBERTS:** I would like the levelised cost of solar produced electricity equivalent to coal in terms of quantities and reliability?

**Mr Miller:** I would point you to the good work that the CSIRO has done in collaboration with AEMO in their GenCost analysis, which is thorough analysis by the team at the CSIRO, which shows you the levelised cost of solar on its own and wind on its tone and then adds storage to that, which is a proxy for firming. I would suggest that we would not be able to provide you with any more information than that high-quality work that has been done by the CSIRO.

**Senator ROBERTS:** That's fine; thank you, Mr Miller—because the CSIRO's assumptions are just woeful. If that's the best and you term it excellent, we're in trouble. That's my view. So thank you for saying that.

**Senator CADELL:** There was a grant to Infravision Australia of \$732,000, looking at powerline transmission. How is that project going? It looked interesting. Is there any research into the development of it? Do we see a possibility of that lowering the cost of other electricity transmission infrastructure in Australia?

**Mr Miller:** The last update I had on that project was late last year. We visited the site in Western Sydney.

**Senator CADELL:** It looks good.

**Mr Miller:** We saw the drones in operation. The theory behind it is impressive and they put it into practice with actual drones and operators, ex-military people, who are manning and navigating those drones. It is pretty impressive technology.

The project we are supporting is to take their technology, which is powerline stringing technology, and use it to apply sensors to the lines while the lines are live. Traditionally, you would have to depower the transmission lines and, often using helicopters or very high cherry pickers, have a team put those sensors on the lines. With the drone technology, they can add these sensors to live lines, which means you don't have to take down the transmission system at that time. The operator explained to me that the major benefit is that, when the transmission lines have to be depowered in the usual way, it creates spikes in the electricity prices because you are constraining the network at that time. It is a hidden advantage of this technology that it actually keeps electricity prices stable while you're working on those transmission lines.

**Senator CADELL:** And they are operating in Europe and North America as well, are they?

**Mr Miller:** I understand they're in the US, and I'm not clear where else they're looking, but certainly in California they have some interest.

**Senator CADELL:** I'm scared to ask anything else, Chair, so I will let this go.

**CHAIR:** At the risk of upsetting everyone, I'm going to ask you one quick question. What investments are you making in hydrogen now? How do you see the future?

**Mr Miller:** If I go back in time, to about September last year, we announced Australia's largest hydrogen electrolyser project, the 10 megawatt Yuri project in Karratha in Western Australia. That project reached financial close and is under construction right now. We will shortly be announcing another 10 megawatt electrolyser project which will be reaching financial close shortly—and I won't spoil the announcement by talking about it much more today—but those will be two of Australia's very largest electrolysers to date. The largest before those was a 1.25 megawatt electrolyser, so it's an eight-time scale-up of these two. We're working on one feed study that has been announced, which is the study you would do prior to reaching a financial close on a project, for the Gibson Island project. And we're hoping to announce another feed study, a sizeable one, very soon.

We have a number of projects that were under the HyGATE initiative, which is the collaboration with the German government, where Australia is providing A\$50 million and the Germans are providing 50 million euros, to joint collaboration projects in hydrogen electrolyser projects. We have four projects that got approved under that funding, and the announcement of those successful commencements will occur very shortly. So there's a huge amount of activity in the hydrogen space and ARENA, frankly, is at the forefront of all of that, given that all of that needs grants support at the phase that these projects are at. ARENA has been working diligently over about four or five years. We've supported 43 projects to date with—I will get the exact numbers—close to or perhaps over \$200 million of grant funding.

**CHAIR:** I wonder if you could, on notice, give us a summary of those. It's very exciting times.

**Mr Miller:** I'm happy to give you a listing of those projects.

**Senator CADELL:** On one of those issues, I was with the Port of Newcastle and Macquarie, and we had \$41 million allocated under the ARENA program. They've since handed that back. I think they're supporting Orica going for the whole \$82 million in Newcastle. Has that happened?

**Ms Evans:** The program that you're referring to is a hydrogen hub program and it's actually administered by the department.

**Senator CADELL:** Thank you.

**Senator VAN:** If I could add a detail to the question on notice, as well as the projects, could you include when they'll be in production as well as the size of production?

**Mr Miller:** Sure, Senator. Some are in production already and on the others we can give you an estimated date.

**Senator CADELL:** I think that's the \$120 million port-ready hydrogen hub project, not the \$41 million ARENA project.

**Mr Miller:** ARENA doesn't have a \$41 million hydrogen project at the port of Newcastle. We provided a \$1.5 million grant to Macquarie and the Port of Newcastle for the feasibility study.

**Ms Evans:** The \$41 million grant was offered and the Port of Newcastle has decided not to proceed, so we are in negotiations with the alternative hub in Newcastle to see whether they could use some of the additional funding that was released as a result of that.



**CHAIR:** Thank you very much. We appreciate your time and expertise. That concludes today's hearing. Thank you to all the witness whose appeared and particularly to Hansard and Broadcasting for their assistance and also to the secretariat. I remind senators that the committee has agreed that written questions on notice should be lodged with the secretariat by 2 June.

**Committee adjourned at 21:49**