

**REPORT ON PROCEEDINGS BEFORE**

**PORTFOLIO COMMITTEE NO. 4 - INDUSTRY**

**INQUIRY INTO THE IMPLEMENTATION OF THE  
RECOMMENDATIONS CONTAINED IN THE NSW CHIEF  
SCIENTIST'S INDEPENDENT REVIEW OF COAL SEAM GAS  
ACTIVITIES IN NEW SOUTH WALES**

**At Parliament House, Sydney, on Tuesday 4 February 2020**

**CORRECTED**

**The Committee met at 13:20**

**PRESENT**

The Hon. Mark Banasiak (Chair)

The Hon. Lou Amato

Ms Abigail Boyd

The Hon. Wes Fang

Mr Justin Field

The Hon. Emma Hurst (Deputy Chair)

The Hon. Trevor Khan

The Hon. Peter Primrose

The Hon. Adam Searle

The Hon. Natalie Ward



**The CHAIR:** Welcome to the second hearing of Portfolio Committee No. 4 – Industry for the inquiry into the implementation of the recommendations contained in the New South Wales Chief Scientist's Independent Review of Coal Seam Gas Activities in New South Wales. The inquiry is examining the status and effectiveness of the implementation of those recommendations. Before I commence I acknowledge the Gadigal people who are the traditional custodians of this land. I also pay respect to the elders past and present of the Eora nation and extend that respect to other Aboriginals present. Today we will hear from industry representatives, advocacy groups and representatives from the Department of Planning, Industry and Environment and the NSW Environment Protection Authority.

Before we commence, I make some brief comments about procedures for today's hearing. Today's hearing is open to the public and is being broadcast live via the Parliament's website. A transcript of today's hearing will be placed on the Committee's website when it becomes available. In accordance with broadcasting guidelines, while members of the media may film or record Committee members and witnesses, people in the public gallery should not be the primary focus of any filming or photography. I also remind media representatives that they must take responsibility for what they publish about the Committee's proceedings. It is important to remember that parliamentary privilege does not apply to what witnesses may say outside of their evidence at the hearing, so I urge witnesses to be careful about any comments they may make to the media or to others after completing their evidence as such comments would not be protected by parliamentary privilege if another person decided to take an action for defamation.

The guidelines for the broadcast of proceedings are available from the secretariat. There may be some questions that witnesses could only answer if they had more time or with certain documents to hand. In these circumstances witnesses are advised that they can take a question on notice. However, please note that given the short time frame for today's hearing and the tabling date, the Committee has resolved that answers to questions taken on notice be returned within five days. Witnesses are advised that any messages should be delivered to Committee members through the Committee staff. To aid the audibility of this hearing I remind Committee members and witnesses to speak into the microphones. The room is fitted with induction loops compatible with hearing aid systems that have telecoil receivers. In addition, several seats have been reserved near the loudspeakers for persons in the public gallery who have hearing difficulties. Finally, could everyone please turn their mobile phones to silent for the duration of the hearing.

**TRACEY WINTERS**, Strategic Advisor, External Affairs, Santos Limited, sworn and examined

**NICK FOX**, Head of Environment and Access, Santos Limited, affirmed and examined

**ASHLEY WELLS**, Director-Government Relations, Australian Petroleum Production & Exploration Association, affirmed and examined

**The CHAIR:** We can now start, if you would like, with a short opening statement. Please keep it to no more than a couple of minutes. If not, we can proceed with questions.

**Ms WINTERS:** Thank you, Chair. I will make a short opening statement. As you know, Santos has made a submission to the inquiry. We support the implementation in full of the Chief Scientist's recommendations and note that recommendations 4 and 9 are still to be finalised by the Government. These recommendations relate to cost recovery from the industry and an insurance regime to guarantee rehabilitation obligations are met. Santos is proudly an Australian company and a leading supplier of natural gas both domestically and overseas. We have been working in partnership with local communities around Australia for 65 years, providing jobs and business opportunities and developing Australia's natural gas resources safely and sustainably to power Australian industry. We are a major producer of natural gas from coal seams in Queensland, where the industry is welcomed by the communities where we operate and where regional towns are thriving because of our industry.

Analysis from Lawrence Consulting shows that the Queensland gas industry has spent almost \$50 billion over the past eight years purchasing Queensland-made goods and services, investing in regional community infrastructure and in payments to government. There are 4,600 long-term direct jobs in the industry there, and 1,700 of those are in Queensland's regional areas. Farmers have received over \$500 million in payments from the gas industry and some are benefiting from a major new source of water supply, available only because of gas production during a period of severe drought. Water and the environment are being protected. The industry and government have worked in partnership to develop a science-based Surat basin underground water impact report, which is a long-term groundwater modelling and monitoring program. Here in New South Wales Santos is seeking approval to develop the Narrabri Gas Project, which has the potential to supply enough natural gas to meet up to half of New South Wales' natural gas demand.

New South Wales imports more than 95 per cent of its gas from other States and, as a result, New South Wales businesses face a big disadvantage compared to their peers in other States. According to the NSW Business Chamber, a commercial baker in Sydney pays \$26,400 more for gas every year than they would in Brisbane. Santos has committed that 100 per cent of Narrabri gas will be sold into the domestic market. Narrabri gas from appraisal wells already supplies the Wilga power station in north-west New South Wales, generating enough electricity to power around 23,000 households. We have 15 staff in Narrabri already and use many local contractors and suppliers to service our operations there. Santos shares the concerns of the broader community that it is vitally important that the environment and water resources are protected and that the community benefits from the development of natural gas in New South Wales.

New South Wales has very strong environmental regulation in place, providing confidence that the project can be developed safely and sustainably. The Chief Scientist's Independent Review into Coal Seam Gas Activities in New South Wales and subsequent implementation of the NSW Gas Plan have ensured that the regulatory and compliance regimes in New South Wales are among the most rigorous in the world. The operational area of the project would be about 1,000 hectares, or 1 per cent of the project area—most of that in State forest. No water would be extracted from the Great Artesian Basin [GAB]. The water produced from coal seams hundreds of metres below the GAB's Pilliga sandstone would be treated and 80 per cent of the water would be available for reuse for irrigation or for other beneficial uses. The water from these coal seams is not used today at all by farmers or any other water users.

The coal seams are 500 metres to 1,200 metres underground and 250 metres to 400 metres of rock separates them from the Pilliga sandstone. Santos will comply with the NSW Code of Practice for Coal Seam Gas Well Integrity, which is also being reviewed by the Chief Scientist. Establishment of a community benefits fund and our commitment to provide 100 per cent of Narrabri gas to the domestic market would also ensure that both the local and broader New South Wales communities benefit. The project will deliver up to \$1.2 billion in royalties to New South Wales to help fund essential government services. The community benefits fund would receive up to \$120 million to invest in local community programs. Santos supports a very rigorous assessment process for the Narrabri Gas Project, which is essential to provide confidence to the community that the project, if approved,

will be developed safely and sustainably. We are happy to answer any questions the Committee may have about our submission to the inquiry.

**The CHAIR:** Mr Fox or Mr Wells, would either of you like to make an opening statement?

**Mr WELLS:** Yes, I will provide a brief opening statement, if I may. The Australian Petroleum Production and Exploration Association [APPEA] is the peak national body representing upstream oil and gas explorers and producers active in Australia. APPEA member companies account for more than 90 per cent of Australia's petroleum production.

*[Interruption from gallery]*

**The Hon. TREVOR KHAN:** Rather than having interjections from the back, can we work out whether the sound is sufficient for members in the gallery?

**The CHAIR:** Could you please talk directly into the microphone.

**The Hon. TREVOR KHAN:** That was not a criticism of you, it is just so that everyone can hear.

**Mr WELLS:** APPEA welcomes the opportunity to present at today's hearing into the implementation of the recommendations of the NSW Chief Scientist's review of coal seam gas [CSG] activities in New South Wales. Hydraulic fracturing is a well-established, tightly regulated technology. It has been used safely to enhance oil and gas production for 50 years in Australia and in more than 1,500 wells in Australia since, and more than two million wells worldwide. There have been more than a dozen inquiries into unconventional gas and hydraulic fracturing in Australia. They have all shown that risks associated with hydraulic fracturing can be adequately managed with good regulation and industry best practice.

Both State and Federal governments in Australia strictly regulate fracking and fracking fluid. Australia's Chief Scientist, Dr Alan Finkel, remarked to the ABC in 2015, "The evidence is not there that it's dangerous. In fact, the evidence is that, if properly regulated, it's completely safe." Fracking is necessary in shale gas and tight gas wells to increase the flow of gas from the reservoir. Hydraulic fracturing is not frequently used in CSG and conventional gas production; only around 6 per cent of wells to date have undertaken hydraulic fracturing. Fracking is also used in geothermal energy production and to improve the productivity of water bores. Given this context, it was welcoming that Professor Mary O'Kane's final report released in September 2014 concluded that the technical challenges and risks posed by the CSG industry can be managed through careful designation of areas appropriate for CSG extraction, and included the 16 recommendations that were accepted by the Government.

It is our view—and our submission goes to this point—that the recommendations have been substantively completed. Only two of the recommendations remain to be fully implemented: recommendation 4, relating to cost recovery; and recommendation 9, relating to insurance. We believe that there is a range of ways that the Government may choose to implement those and we look forward to hearing how those may be achieved. In the five years since the review was undertaken, several developments in the science and information underpinning gas development, as well as the market in which it operates, provide further impetus to support domestic gas development in New South Wales. Our submission provides details about some of those developments in the attachment towards the back. The east coast gas market is at an important stage of its development, and there is a clear, identified need to unlock new gas supplies in the domestic market.

The most effective way to place downward pressure on prices is to increase investment and supply. APPEA strongly recommends the announcement of a bilateral agreement between the New South Wales and Federal governments last week to help address this need by delivering an additional 70 petajoules to the New South Wales market. As my colleague at Santos has just indicated, 95 per cent of gas supply into New South Wales is currently imported from other sources, primarily from Queensland. The development of Narrabri would significantly address the domestic supply requirements that New South Wales has moving forward. I will leave it there and I am happy to take any questions.

**The CHAIR:** I will start with Mr Justin Field.

**Mr JUSTIN FIELD:** Thank you for your attendance here today and for your submissions. Mr Wells, I might start with you. Did APPEA seek any input from Ministers, staff within a Minister's office or from any departmental staff in preparing your submission to this inquiry?

**Mr WELLS:** No.

**Mr JUSTIN FIELD:** Did the Government share with you its submission to this inquiry before you made yours?

**Mr WELLS:** Certainly not.

**Mr JUSTIN FIELD:** It is curious then that there are some parts of your submission that are identical to the word, and almost identical in places, to the Government's submission. Can you explain that?

**Mr WELLS:** Yes, absolutely. Going to that point, we checked internally to verify this. The process that we undertook to write that submission was effectively a desktop search of all publicly available information. Where there is a Government statement already prepared, it was, as you might say, a copy and paste or paraphrase. There was certainly no contact between the Government—between the relevant departments—and APPEA during this process.

**The Hon. ADAM SEARLE:** Just on that, in terms of the proposition you have advanced that all of the recommendations bar two have been implemented, that is not the result of your own independent interrogation—you are just accepting the Government's word on that?

**Mr WELLS:** Absolutely. The staff member at APPEA went through the relevant online information that was available and, where that has been verified, has been going through individual departmental websites and going through estimates. That information has then been provided. So yes, if the point that you are making is, are we accepting the Government's advice that that has been the case—if that is what the Government has provided on its websites, then that is what has been reflected in our submission.

**The CHAIR:** You have not used any information other than what you have garnered from budget estimates and department websites?

**Mr WELLS:** Correct. That is right.

**Ms ABIGAIL BOYD:** So not through consultation with members or member organisations?

**Mr WELLS:** We have one active proponent in New South Wales. As you would expect, Santos and APPEA certainly share information from time to time.

**Mr JUSTIN FIELD:** Which is why it was interesting to me that Santos' submission was slightly different in those same areas where you were identical to the Government's. I ask this question because the most recent public information—

**The Hon. TREVOR KHAN:** There is a conspiracy because they are different?

**Mr JUSTIN FIELD:** The suggestion here is that a desktop study uncovered the status of particular recommendations and APPEA quoted from that. Santos did not do the same desktop study, or did not talk to their industry association or came up with a different view. The reason I asked this question last time was because at the core of the Chief Scientist's recommendations was recommendation 2, which relied on clear and open communication about CSG matters, both within the industry and to the public. The community submissions here have a very different view about the application of the Chief Scientist's recommendations than the Government, APPEA and Santos, who are remarkably similar, if not identical. I ask again, because the most recent public information that outlines the Government's status of the Chief Scientist's recommendations is the October 2015 implementation report. There may have been statements in certain budget estimates after that—I do not deny that, it is why I am asking the question. Your submission is different to what was in that document but is identical to the Government's submission in at least three places that I have found. That was the basis of my question.

**Mr WELLS:** Let me go to footnote number six, which cited the NSW Planning portal. I submit that that is actually the evidence that we have used and have referred to.

**Mr JUSTIN FIELD:** Okay.

**Mr WELLS:** It is fully referenced.

**Mr JUSTIN FIELD:** It is clear that you have not consulted with the Government and the Government has not consulted with you on the details of the submission.

**Mr WELLS:** Certainly not.

**Mr JUSTIN FIELD:** I accept that. I wanted to ask the question because it was curious to me. This next question is really for Santos and possibly for you, Ms Winters—I will let you decide. It goes to the response to submissions around the Narrabri Gas Project. I hope the inquiry will indulge me here because it does go to the same point about communications with the community around how CSG is operating and yours being the only life proposal for coal seam gas in New South Wales. It has been widely reported in the media that Santos has failed to adequately address the number of concerns from government agencies in your response to submissions regarding the Narrabri Gas Project. I just wonder about your response to those media reports.

**The Hon. NATALIE WARD:** Through the Chair, just by way of procedural fairness, is it not reasonable to ask that the source of that quote be provided?

**Mr JUSTIN FIELD:** I can go into each of the specific ones. There has been wide media reporting about the response to the submission documents.

**The Hon. NATALIE WARD:** You made reference to a very specific quote and I think it only fair that the source of that—

**The Hon. ADAM SEARLE:** One of them was a front page story in the *Daily Telegraph* of the Deputy Premier and the planning Minister being critical of Santos.

**The Hon. TREVOR KHAN:** There you go.

**The Hon. NATALIE WARD:** They may well be.

**Mr JUSTIN FIELD:** Let us start with a more specific one. I was not going to quote because there have been numerous stories so I was trying to be general. There are reports that Santos refused Narrabri council's request to obtain environmental insurance for offsite and long-term environmental harms. Of course, you have identified that insurance was part of the Chief Scientist's recommendation but I just wonder about your response to those suggestions.

**Ms WINTERS:** I do not think it would be appropriate for me to comment on media speculation at all. I think it is a matter for the Department of Planning. It has been the agency responsible for handling or coordinating the issues that different agencies raise. I think it would be a normal part of the process for them, in their assessment report when they complete it and make it available, to identify whether or not the agencies' responses have been adequate. That is the process and it is yet to play out but I do not think it is appropriate to comment on media speculation.

**The Hon. ADAM SEARLE:** Can I ask this question? Where is the process presently up to as far as you understand? What is the time frame for your application to be referred to the Independent Planning Commission as far as you know?

**Ms WINTERS:** The only thing we know with certainty is that we have provided all the information that the Department of Planning requires. So it is not seeking any further information from us. The question of timing, around when it will complete its assessment report—when the project will be referred—is entirely a matter for the Government. Obviously Santos would like that to happen as soon as possible but there is a process to be gone through. We understand that. We know that it needs to be robust, rigorous and independent so we will wait for the Government to make its decisions in that regard.

**The Hon. ADAM SEARLE:** Just to be clear. It is the position of Santos is it not, that you have provided the Government agencies with all of the information they require? You do not accept that you have failed to produce relevant information? Is that right?

**Ms WINTERS:** We have provided all of the information we have been asked to provide and we do not have any requests outstanding in front of us. That is the situation.

**Mr JUSTIN FIELD:** Can I ask it in a slightly different way? Did you refuse the Environmental Protection Agency's [EPA] request to assess the capacity of landfill facilities to accommodate volumes of salt waste that would be produced from the Narrabri project?

**Ms WINTERS:** I cannot answer that question. I have not been directly involved in those matters but I am happy to take that on notice.

**Mr JUSTIN FIELD:** I understand there were additional groundwater monitoring points requested by agencies responsible for water resources that Santos has refused to implement as part of the development of your proposal?

**Ms WINTERS:** Going back to my earlier point. I think that the correct process will be that the agencies and the Department of Planning will be the ones who can answer those questions. At the moment no one has seen the assessment report. Those kinds of things are all going to be addressed—one would assume—in the assessment report.

**Mr JUSTIN FIELD:** I might move on then. Can you outline the amount of royalties that you have paid so far for the exploration and appraisal of gas from the Pilliga that you have been using commercially?

**Ms WINTERS:** My understanding is that we calculate the royalty payment, and there is a royalty to be paid, but like all royalties there are also deductible costs and because at this stage we have not produced enough gas to offset those deductible costs—so over time we will pay royalties—we have not paid royalties so far because we are not in a tax paying position according to the New South Wales royalty regime.

**Mr JUSTIN FIELD:** Can you estimate how much gas has been extracted and used commercially in the Wilga Park Power Station, I guess since 2014 when I think that change in the royalty arrangement happened?

**Ms WINTERS:** I would have to take that on notice.

**Mr JUSTIN FIELD:** If you could I would appreciate that.

**Ms ABIGAIL BOYD:** Thank you. Mr Wells, I am just looking again at your submission and there is a line that jumps out at me about the pricing in the east coast gas market. There is a line here that the most effective way to place downward pressure on those east coast gas market prices is to increase investment and supplies. Do you believe that to be a true statement?

**Mr WELLS:** Absolutely.

**Ms ABIGAIL BOYD:** You do not think, for example, that the most effective way to place downward pressure on prices would be to reduce the amount that we export off of the east coast for instance?

**Mr WELLS:** You make an interesting assertion that is not borne out by the evidence. The origins of the Queensland natural gas industry that you are referring to came about because of the investment required to generate—. Well, export demand was there. Had there been domestic demand only investment would not have taken place into Queensland. Those long-term contracts have underpinned the development of the Queensland gas industry and that gas has now also been made available for Queensland. The point is at the same time States like New South Wales and Victoria have also imposed moratoria which has reduced supply in the east coast market. Transmission of gas supplies from Queensland to the southern states actually does have a cost associated to that and we can certainly provide you with some more information about that. But as a general proposition it remains the case that historically gas produced closer to the market which it is going to is the cheaper gas.

**The Hon. ADAM SEARLE:** Depending on other structural costs.

**Mr WELLS:** Sure. I accept that. But there are a range of factors that go into the price of gas that a manufacturer is paying and gas production is typically only a relatively small component of that. There are transmission costs, transport costs that also need to be factored into account.

**Ms ABIGAIL BOYD:** Do you accept that since we opened up the export market for gas that gas prices on the east coast have tripled?

**Mr WELLS:** That is a true statement.

**Ms ABIGAIL BOYD:** Do you think that is perhaps because of the link now—the inextricable link—between the domestic market and the international market?

**Mr WELLS:** The international price that is being paid for domestic gas has been proven by a number of studies not least of which the Australian Competition and Consumer Commission [ACCC] has been undertaking in gas price review that has effectively found that what you are referring to as spot prices do not reflect the contract prices being paid. International comparisons have also found that prices being paid typically in north Asia—which I suspect is where your point of reference is—continue to be above those that are paid in Australia.



**Ms ABIGAIL BOYD:** The New South Wales Independent Pricing and Regulatory Tribunal [IPART] stated in 2014 that development of the three liquefied natural gas [LNG] export projects meant that the eastern gas region has become linked to global LNG markets and that as a consequence New South Wales prices have adjusted to world prices. So again coming back to your statement that the most effective way to reduce prices along the east coast would be to increase supply, perhaps breaking that link and not exporting as much gas would also not only increase supply across the east coast but also reduce prices.

**Mr WELLS:** I go back to my earlier statement that you would not have had the development of the Queensland domestic gas industry at all without that export market in place so it is a little bit of a chicken and egg argument I would contend.

**The Hon. ADAM SEARLE:** But there was already a domestic gas production.

**Mr WELLS:** It was very small by comparison to what we have now.

**The Hon. ADAM SEARLE:** Given that the majority of the gas we produce is exported, the amount of gas available for domestic purposes—

**The Hon. TREVOR KHAN:** Sorry, this is we in New South Wales or we in Queensland?

**The Hon. ADAM SEARLE:** Australia.

**Mr WELLS:** I come back to the point that at the end of the day—

**The Hon. TREVOR KHAN:** Sorry, I am just trying to work out where any of this has any connection with the terms of reference.

**Mr WELLS:** I come back to the point that New South Wales is importing 95 percent of its gas requirements.

**The Hon. ADAM SEARLE:** But that is not a new development is it?

**Mr WELLS:** No it is not but historically it might have come out of South Australia at Moomba or it might have come out of Victoria through Bass Strait. But the point remains that in relation to Queensland—which is where this question is going to—we would not have had the investment that has gone into Queensland and the development of that industry without having those export contracts in place.

**The Hon. ADAM SEARLE:** Going back to the issue of insurance—I think recommendation nine—I think you all accept that is an important recommendation made by the Chief Scientist. I think it is accepted that it has not been implemented by Government has yet. Should not any further development of the industry and any approvals await the implementation of that recommendation to make sure that everyone has sufficient protection against risk?

**Mr WELLS:** I will leave that for my colleague.

**Ms WINTERS:** We have said that we support the recommendation. I think it is with the Government to determine how it proposes to implement the recommendation and it would be a question for the Government.

**The Hon. ADAM SEARLE:** But for example if the view of Government was that any approvals or assessment of any project should await implementation of that recommendation you would have no argue with that?

**Ms WINTERS:** I have said that we support the full implementation of the Chief Scientist's recommendations. It is really a question for the Government to determine how it wants to implement that recommendation. From Santos' perspective we already hold bank guarantees to cover, or the New South Wales Government holds bank guarantees to cover the extremely unlikely event that we did not meet our obligations. But the implementation of the recommendation itself is a question for the Government. It is not something that we can answer today.

**The Hon. ADAM SEARLE:** But those guarantees that the Government holds are really to do with rehabilitation of the land that Santos itself may be using for gas production. In terms of the risk that may be experienced by adjacent—

**The Hon. TREVOR KHAN:** Sorry. Just so it is clear. There was a bit of a grunt. Was that a yes? Is that what the bank guarantee is for?

**Ms WINTERS:** Yes, yes.

**The Hon. ADAM SEARLE:** So it is a rehabilitation bond? So in terms of guarding against risk that neighbouring properties or others in the vicinity may experience as a result of any operations by yourself or any other gas proponent, they are currently not covered by any insurance product in the private market? Do you accept that?

**Ms WINTERS:** Mr Searle, I think we have said that we support the Chief Scientist's recommendations in full. Recommendation nine is one for the Government to decide how it intends to implement it and I cannot speak today for the Government.

**The Hon. ADAM SEARLE:** I appreciate that. That is okay. I will move on to the next question. In your submissions, you say that Santos is committed to making all of the Narrabri gas produced only to the New South Wales domestic market and you would be willing to accept a condition of approval. I understand that. Is it actually part of your application or will it be part of your application that you seek that condition beyond any doubt?

**Ms WINTERS:** We have told the department and we are happy to put that in writing to the department. I would have to check this but we may already have done that. But certainly we would be happy to accept a condition to supply the gas to the domestic market. That is correct.

**The Hon. ADAM SEARLE:** Just on that can you provide to the Committee any documentation that verifies that statement?

**Ms WINTERS:** I said I would check whether we have put it in writing. We may have but if we have that would depend on whether it was commercial in confidence or what the confidentiality requirements are that we have with other parties.

**The Hon. ADAM SEARLE:** Okay. Please communicate that with us because I think we have the capacity to receive information on a confidential basis.

**Ms ABIGAIL BOYD:** Just on that point my understanding is that the Narrabri project is a relatively high cost gas development. Would it actually be commercially viable to export the gas or would it be too expensive and that is why it needs to be kept within the domestic market?

**Ms WINTERS:** It is not correct that it is a high cost project. Since the Environmental Impact Statement [EIS] was originally developed Santos has made enormous improvements in its cost base for coal seam gas operations. Just as an example, since the end of 2015 we have reduced our connected coal seam gas well costs in Queensland by a massive 84 percent. So as we have had experience developing coal seam gas fields in Queensland over the last several years, we have improved the cost of supply enormously. So it is not correct that it will be a high cost project.

**Ms ABIGAIL BOYD:** The Australian Energy Market Operator [AEMO] in 2019 ranked the project 41 out of 51 of the actual undeveloped gas projects across Australia with an estimated production cost—so the tenth most expensive—of \$7.40 per gigajoule. Are you saying that estimated production cost has been reduced since this was reported in 2019?

**Ms WINTERS:** That is something I would have to take away and come back to you on.

**Ms ABIGAIL BOYD:** On the basis that it is—as the AEMO has pointed out—a relatively high cost and relative to the other projects that the AEMO assessed, is it then true to say that actually it would be an expensive product to export and that is why you can say quite happily that it would be 100 percent domestic?

**Ms WINTERS:** No, that is not correct. It is not why it would be a domestic gas project. I will take that on notice and come back to the Committee with an explanation of what is in the AEMO report and the project cost.

**Ms ABIGAIL BOYD:** Can I also ask you about those security deposits for the rehabilitation? What is the structure of those security deposits? Do you have any actual— So I understand it is some bank guarantees? Has there also been some cash given or is it all in bank guarantees at the moment?

**The Hon. TREVOR KHAN:** That is only at the moment.

**Ms WINTERS:** It is bank guarantees.

**Mr FOX:** Bank guarantees.

**Ms ABIGAIL BOYD:** And those bank guarantees, are they first ranking security? What is the—

**Mr FOX:** I can take that on notice. I do not know the status of those but—.

**Ms ABIGAIL BOYD:** It would be good to know the terms and whether there are other competing interests on that security. That would be really good.

**Mr FOX:** We can take that on notice.

**Ms ABIGAIL BOYD:** We have seen that in some other areas.

**The Hon. ADAM SEARLE:** In terms of Santos' current production of gas. A lot of it is in Queensland. Is it anywhere else? Where do you produce gas from?

**Ms WINTERS:** Absolutely. Santos produces gas in Queensland, in South Australia, in the Northern Territory, offshore—in Timor-Leste actually the Bayu-Undan project—and in Western Australia. So we are Western Australia's biggest domestic gas supplier. We supply about 40 percent of the market in Western Australia and we invest heavily in domestic gas supply to the east coast as well.

**The Hon. ADAM SEARLE:** Are you currently supplying gas into New South Wales?

**Ms WINTERS:** Yes we do.

**The Hon. ADAM SEARLE:** And where is that gas sourced from?

**Ms WINTERS:** South Australia and Queensland.

**The Hon. ADAM SEARLE:** Okay. So if the Narrabri project was approved and if as you say you guaranteed that all of that gas production would be sold only into New South Wales, how do we know that there would not be some sort of balancing out of the other gas that you already supply to New South Wales so that there is no improvement in the net supply of gas from Santos to the New South Wales market?

**Ms WINTERS:** Almost all of our gas is sold on contract and you may have seen that last week we renewed a six-year contract with Qenos at Port Botany so I guess the answer is—.

**The Hon. ADAM SEARLE:** You would be bound by the individual contract.

**Ms WINTERS:** It is contracted and often for quite long periods of time. So this will be new supply for the domestic market.

**Mr JUSTIN FIELD:** So what happens if the gas is it turns out expensive and no one wants to contract your gas here because the import terminal at Port Kembla is built and it is going to be cheaper for them to get it imported? That gets you out of your commitment to provide it domestically does it not? Then you can just export it anyway.

**Ms WINTERS:** No, that is not correct. We have always said—and we will stand by this—that Narrabri gas will always be cheaper for New South Wales customers than gas imported from overseas. So it is not going to be—.

**Mr JUSTIN FIELD:** Have you done any modelling—.

**The Hon. TREVOR KHAN:** How can you be certain of that fact?

**The CHAIR:** I was just going to ask that. How do you make such a guarantee?

**Ms WINTERS:** It is because of all the—.

**The Hon. TREVOR KHAN:** It might be correct but I would just like to know the reasoning behind the assertion.

**Ms WINTERS:** Because if you think about it you are refrigerating the gas that is being imported to New South Wales somewhere in the world. Then you are transporting it by ship—potentially very long distances—so you have had the production costs, the transport costs to the LNG plant where it was produced, the cost of turning it into a liquid at that plant, the cost of shipping it to the destination it is coming into, the cost associated with turning it from a liquid back into a gas and then another set of pipeline costs to get it to the customers. So that is a lot of costs.

**The Hon. TREVOR KHAN:** But the pipeline costs once gas is onshore is essentially a fixed cost because the pipelines exist now. Whichever way the gas comes from it is going to be shipped onshore by pipe, yes?

**Ms WINTERS:** From the import terminal it will go into a pipe and be transported.

**The Hon. ADAM SEARLE:** But what about gas that has already been supplied into New South Wales through the pipeline, say from South Australia or Victoria? That does not have the same cost of gasification and re-gasification?

**Ms WINTERS:** No, that is right. That does not have those costs.

**The Hon. ADAM SEARLE:** So it is just the transport costs through the pipe.

**The CHAIR:** To use your example in terms of production costs that are apparently increased by sending it overseas, we have seen that negated in other markets. You can take Australian timber, send it over to Malaysia, make yourself a dining table, send it back to Australia to be sold cheaper than if it was made here. How can that not—with the magic of globalisation—how can that not be foreseen as a potential future event? That you guys somehow get undercut by an international party.

**Ms WINTERS:** I cannot comment on the timber industry. I can only tell you what our assessment is and our view is that Narrabri will be cheaper for New South Wales customers than gas imported from other States or from overseas.

**Mr WELLS:** Can I just make another observation on that? The Australian Petroleum Production and Exploration Association [APPEA] is agnostic on whether or not having an import terminal will affect domestic production. We want more supply into the market. In terms of an import terminal, what it would do though is set a new floor price for the price of gas that is being paid by consumers in New South Wales. Given all the costs that my colleague—

**The Hon. TREVOR KHAN:** Sorry, can I just interrupt before you go on? Can you explain why?

**Mr WELLS:** Because of all of the associated costs that have just been identified in terms of the extraction, the refrigeration, the shipping and turning that back into a gas at the other end. There is a manufacturing cost attached to that and that is a cost that is factored into the long-term contracts that our members typically—through Queensland, through the Northern Territory and through Western Australia—have all factored into their business models and that is what is being paid by international customers.

**The Hon. ADAM SEARLE:** And the expectation is that the import terminal-priced gas would actually be higher—at least as expensive if not more expensive than current gas prices?

**Mr WELLS:** Correct.

**The Hon. ADAM SEARLE:** And more likely to be more expensive than current gas prices?

**Mr WELLS:** Correct. That is right.

**The Hon. ADAM SEARLE:** Which is why no one is rushing ahead with investment decisions on Port Kembla.

**Mr WELLS:** Correct. That is right.

**Mr JUSTIN FIELD:** Similar to the assurance that you gave before with regards to domestic supply for gas. I think in your submission, if I recall correctly, you indicated that it is not your intention to frack any wells as part of the Narrabri Gas Project. Are you able to give an assurance that you will not frack any wells as part of the Narrabri Gas Project?

**Ms WINTERS:** Let me say that is a commitment has been made. It is in the EIS so there will not be any hydraulic fracturing of wells for the Narrabri Gas Project.

**The Hon. TREVOR KHAN:** Just so that is clear. That is not only a commitment by Santos, that will be a condition of the consent. Is that the expectation?

**Ms WINTERS:** I do not know. Again, that will be a matter for the Government but certainly that is what we have said in the EIS.

**The Hon. TREVOR KHAN:** So that concession is being made upfront in any application. Is that right?

**Ms WINTERS:** Yes. Having said that, I would like to add that—

**The Hon. TREVOR KHAN:** I worry about a caveat now being added.

**Ms WINTERS:** Sorry?

**The Hon. TREVOR KHAN:** I worry about a caveat now being added.

**Ms WINTERS:** No. It is not a caveat.

**The Hon. ADAM SEARLE:** I have got a follow-up question.

**Ms WINTERS:** It is just a simple comment that we conduct hydraulic fracturing already in the Cooper Basin where New South Wales gets its gas from so we are doing that and have been doing that for the last 50-odd years. Hydraulic fracturing is something that is being done. It is a technique that is used to extract the gas that customers in New South Wales today are using and it is conducted safely and sustainably. That said, in Narrabri the EIS includes the commitment that there will be no hydraulic fracturing.

**The Hon. TREVOR KHAN:** That is where I wanted you to end.

**The Hon. ADAM SEARLE:** So you say that is a commitment you have made in the EIS. If there is no condition imposed by whatever planning authority gives you permission—

**Ms WINTERS:** Mr Searle, that is a matter for the Government. I cannot talk about conditions that—

**The Hon. ADAM SEARLE:** Ms Winters, let me finish my question.

**Ms WINTERS:** Okay.

**The Hon. ADAM SEARLE:** So I understand your commitment. But if there is no condition actually prohibiting it your company would be free to revisit that issue at a subsequent point in time if for operational reasons, for example, you felt that would be advantageous. If there is no planning condition restraining you, you would be free to do that at some future point.

**Ms WINTERS:** I can only tell you what is in the EIS. We have said there will not be any hydraulic fracturing.

**The Hon. ADAM SEARLE:** Have you asked for a planning condition to that effect?

**Ms WINTERS:** It will be a matter for the Government to decide whether it puts that condition on.

**The Hon. ADAM SEARLE:** Okay and I am not trying to be unfair but I have noticed, for example, in some contested mining applications proponents to put issues to bed—for example I think it was in the Murrumburrah mine—actually sought a condition from the approver to put a matter beyond doubt. To actually say, please impose a condition that does this. To be clear on domestic reservation and now on hydraulic fracturing, you have not proactively sought on either occasion a consent condition restraining you in either of those two respects, have you?

**Ms WINTERS:** Let me come back to you on that. I will have to take that one on notice.

**The Hon. ADAM SEARLE:** Please do.

**The Hon. TREVOR KHAN:** There is a follow-up question and it is not a question that you can answer today but on notice can you advise whether Santos will ensure that any consent they obtain will contain a condition prohibiting fracking. I am not asking for you to answer that today, I am asking for you to take that on notice and come back on behalf of Santos.

**Ms WINTERS:** Okay.

**Ms ABIGAIL BOYD:** Can I just ask what would the predicted impact be on Santos' export business if new import terminals were to be created and you were faced with an influx of imported gas?

**Ms WINTERS:** It is not an issue for us. We have as, Mr Wells also said, no objection to import terminals. We simply do not think that they will provide cheap gas for domestic customers but it is not a question of them having any impact on our other business.

**Ms ABIGAIL BOYD:** If the gas terminals were approved and were to go ahead, would Santos still go ahead with the Narrabri project?

**Ms WINTERS:** Yes.

**Mr JUSTIN FIELD:** If I could move on to something a bit closer to home up in Narrabri. It goes back to the commentary before about communication between the community, the Government and Santos. I understand that People For The Plains—the local community group up there—temporarily suspended their attendance of the Narrabri Gas Project Community Consultative Committee [CCC] I think late last year. I know they were concerned about how the CCC was operating, its independence of the Secretariat which I believe now is being handled by Santos, and they cited concern about Santos' willingness to answer questions from the community about the status of the project and things like that. I was just wondering if you have got a response to those concerns? I understand they have written to you about it.

**Ms WINTERS:** Santos receives questions from the Community Consultative Committee and we provide responses to all of them and will continue to do that.

**Mr JUSTIN FIELD:** Their specific concern is that has not been happening, that they have put questions through the CCC—through their representative on the CCC—to Santos and they have not got answers back. So I am wondering if you were willing to today commit to providing those questions either directly to them or potentially through the Committee—if they wanted to provide them to the Committee—for you to answer on notice?

**The Hon. TREVOR KHAN:** Doesn't it depend on the question?

**Mr JUSTIN FIELD:** I guess it does but the suggestion is that they are not being answered.

**The Hon. TREVOR KHAN:** It is just so broad that what you are asking the witness to commit to is pretty hard.

**Mr JUSTIN FIELD:** I understand the concern and I offered an alternative option for Santos to publicly commit to answering it outside of the committee forum. When you have the local group that is on the CCC withdrawing from the CCC as the project is going through the planning stages, that suggests that something is going wrong. One of the key aspects of the Chief Scientist's recommendations had to do with miscommunication between the community and the company. I am just wondering what has gone wrong here.

**Ms WINTERS:** As I said, we do provide answers to the questions we have received. We will have a look to check whether there are any outstanding and there may well be from the last meeting. If there are, we will make sure that those responses are provided through the committee when it next meets, which is the normal process.

**The Hon. ADAM SEARLE:** On the issue of the status of the implementation of the Chief Scientist's recommendations, I note that in its submission Santos has attached a table. I think Mr Wells has addressed this issue. There is some contested evidence we have received previously, for example, around the Chief Scientist's recommendations for a whole-of-environment data repository. The Government says that it has developed a thing called a Sharing and Enabling Environmental Data [SEED] Portal. You have not independently interrogated whether the SEED Portal has all the characteristics that the Chief Scientist recommended in her findings, have you?

**Ms WINTERS:** No.

**The Hon. ADAM SEARLE:** The Chief Scientist also recommended a risk-management predictive tool. Again, we have mixed evidence—we know the Government has not developed its own tool. It says that there is range of mechanisms that it is using but it has not developed a bespoke one. Again, in terms of your table of the status of the implementation of the recommendations, you are all just accepting what the Government says about what it has done. You have not independently verified that yourself?

**Mr WELLS:** From our point of view, that is right.

**The Hon. ADAM SEARLE:** Is that the same for Santos, as well?

**Ms WINTERS:** I would like to check that one. I am not sure about it.

**The Hon. ADAM SEARLE:** I would like you to check that one, too. Again, the same on the standing expert advisory body—the recommendation was that the Government should develop its own. The Government

says that it is using the Commonwealth implemented expert standing committee. The evidence we have received is quite clear that the function of the Federal body does not meet the description in the Chief Scientist's recommendations. Again, in terms of your acceptance that that has been fully implemented by the New South Wales Government, where is your information coming from?

**Ms WINTERS:** I think Santos is of the view that it is appropriate to use the Commonwealth scientific expert panel.

**The Hon. ADAM SEARLE:** Instead of implementing the Chief Scientist's recommendation? Because it is not what the Chief Scientist recommended.

**Mr JUSTIN FIELD:** Which asked for ongoing advice, whereas the independent expert scientific committee is on occasion. It gets a referral and it provides a response back—not ongoing.

**Ms WINTERS:** I think it does provide ongoing advice.

**The Hon. ADAM SEARLE:** That is not the evidence we have.

**Mr WELLS:** I think it is upon request.

**Ms WINTERS:** Let me take that one notice, as well.

**The Hon. ADAM SEARLE:** In short, please come back to us with whether you have relied on the Government's assertions about its implementation of the recommendations or whether you have independently interrogated them and satisfied yourself and how you have done so.

**The CHAIR:** That is all the time we have for these witnesses. I thank you for your time coming in and for your candour.

**(The witnesses withdrew.)**

**GEORGINA WOODS**, NSW Coordinator, Lock the Gate Alliance, affirmed and examined

**SALLY HUNTER**, Secretary, People for the Plains Inc, affirmed and examined

**The CHAIR:** Welcome. Would either of you like to give a short opening statement?

**Ms WOODS:** Yes, thank you. I begin by thanking the Committee for conducting this inquiry. Sometimes people who are still grappling with the coal seam gas industry after the initial wave of reforms began feel a bit neglected, so it is really terrific that this inquiry is happening. Thank you for the opportunity to present. In our view the Government's failure to complete and implement the Chief Scientist's recommendations is worsening public distrust and fear and concern about the coal seam gas industry. The so-called "world-class regime" was left unfinished and the so-called "careful regulation" that was meant to deal with the environmental, social and economic risks of coal seam gas has not been completed. That unfinished job is manifesting as a lack of data on water, economics, fugitive emissions, a lack of attention and care to understanding what data there is and on using appropriate tools and models to predict and detect the impacts of the industry. It is manifesting with a lack of a framework and architecture for public access to information for oversight by government for ensuring that the industry is not going to have damaging consequences.

That lack is badly affecting particularly the north-west of New South Wales, which missed out on the no-go areas that were declared, the licence buybacks and a lot of baseline data being collected. A lot of the political attention focused on coastal areas, Sydney's drinking water catchment and the Hunter. The 12 licences in the north-west predate the NSW Gas Plan and the Chief Scientist's report and have never really been re-examined by the a government in terms of their appropriateness as areas for coal seam gas exploration or development. I suppose all of those lacks together really lead to the very real risk—the likelihood, in our view—of unforeseen consequences as a result of an industry if it is allowed to get going. Those consequences will be felt by people in the north-west and the damage will unfold over generations. The impact of the Narrabri Gas Project on water is expected to be at its worst more than a century after the gas field has stopped operating, so those impacts will be unforeseen and will be borne by the people of north-west New South Wales.

**The CHAIR:** Thank you. Ms Hunter?

**Ms HUNTER:** I grew up on a property north of Roma and watched our district gradually become a gas field. Ultimately, it drove out the families who could not bear to have these changes forced upon them. My parent's beef business was rendered unworkable and this played out badly for their mental health, their marriage and their farm. These are the social impacts of this industry and they were not captured by the Chief Scientist's recommendations. Today I represent People for the Plains. I own a farm near Baan Baa, not far from Narrabri. People for the Plains' mission is to educate the community and advocate on the proposed gas field. The question that jumps out to me is: How is it that the people who determine what level of risk is acceptable and how those risks should be managed do not have to live with the risks? Meanwhile, the people of the north-west, who will be the ones who live with the risk, are not valued in the process and our voices are rarely heard.

Landholders do not have the right to say no to gas on their own land. Narrabri is the only new gas project in the State. It is the only place that can act as a true test case on whether or not the Chief Scientist's recommendations are actually being implemented. We came here today to state that they are not. Our group has had first-hand experience in the culture of the industry for the past 10 years. We have had quite a bit of discussion here already about our more than 100 outstanding questions that have not been answered by Santos, which finally led to our resignation or our suspension of our seat late last year. We are not the only organisation that has taken that view; there is another organisation that had a seat at the table as well and it no longer participates in a suspended way as well.

We have first-hand experience of the Government's failure to fulfil recommendation number 2, which is to ensure clear and open communication on CSG matters at all times. We have watched as former Minister Harwin, our previous Barwon MP, the company and others tell us and each other constantly that there is nothing to worry about and that everyone wants the gas field. Today I am tabling a new report that we have compiled with all the studies undertaken to date of the social acceptability or otherwise of the Narrabri gas project. It pulls together eight datasets that basically in one line show that between 52 per cent and 98 per cent of people are in opposition to the project and to CSG. I would like to distribute that at some stage, if that is okay. Thankfully, we now have a new MP in Barwon who is not afraid to speak up for this majority.



There are two crucial questions that were not addressed by the Chief Scientist or by the Government's actions since. Firstly, is there economic justification for coal seam gas? Thank you for that conversation this afternoon. At the moment, it seems to us that imported gas is more economically viable than Narrabri gas, totally undermining the premise of the gas plan. Secondly, as Ms Woods alluded to, is the north-west the most appropriate place for a gas field? The Government's buyback process and creation of no-go zones did not even look at the north-west. The north-west was drastically underrepresented politically at that time and this meant that our petroleum exploration licences remained even after they expired. None of our farmland, towns or water resources were made off-limits to coal seam gas, while other areas with similar resources and assets ended up in no-go zones in places like the North Coast, the Hunter and the Illawarra.

There are risks from the gas field; the Chief Scientist has stated it and it has been said at Community Consultative Committee [CCC] meetings over the years. Mr Banks said on SBS that it could not guarantee that the water and the Great Artesian Basin would not be impacted. Santos has not been able to give a guarantee that the sulphate-reducing bacteria found in the bore water samples of test holes in the gas field would not erode the well casings. Our landholders have been told their insurance companies will not insure them against the risks of contamination.

I would like to respond to a comment this morning from Santos that there are no farmers who rely on the Gunnedah-Oxley Basin water. I have friends whose businesses entirely rely on that water and it shows the lack of understanding that Santos has for our community. With the recent bushfires, terrible droughts and predictions of increased frequency of more natural disasters, we cannot afford for coal seam gas to risk our water or release obscene levels of methane into the atmosphere. The Government's failure to implement the Chief Scientist's recommendations is putting our water and our future at risk. We appeal to the Committee to help us with this.

**Mr JUSTIN FIELD:** Thank you both so much for being here. Ms Hunter, you heard Santos's response to my questions about how the consultative committee was operating. I understand now you have temporarily stood aside from that committee. Could you give us more of a response to their questions and maybe clear up the minds of Committee members who might not have read as much about this as I have about why you left and what is the status of your concerns.

**Ms HUNTER:** We have had a member on that CCC and our organisation, People for the Plains, has had members on other CCCs in the region for many, many years who report back regularly to our group. In the situation of the Santos CCC, over time our representative had felt increasingly belittled and not respected in that environment. Over time, we have noticed this reluctance to answer the questions that have been put forward. We saw that the role of the CCC was to act as a conduit between the community and the company and the Government departments. In that vein, we have called regularly for our community to ask the questions that concern them and over time those questions have not been answered.

**Mr JUSTIN FIELD:** What sort of questions are you talking about that Santos has not been answering?

**Ms HUNTER:** Some of the questions have been put to Santos; some have been put to the departments. There have been questions that are not dissimilar to the issues that are raised here: Can Santos really guarantee that it will not frack in the region? There have been specific questions about the monitoring of water in the gas field. There have been questions about the community benefit fund and how that will play out in our community.

**Mr JUSTIN FIELD:** Have you had no response or inadequate responses or obfuscation?

**Ms HUNTER:** Some questions have been responded to over the years. We have been there for a lot of years, but it seems to be an increasing trend where these things were not being responded to. Once we got up to the 100 mark of unanswered questions, we felt that that was too much to take.

**Mr JUSTIN FIELD:** Has that changed since the Government stopped the department that used to act in the secretariat role? Has that changed since they moved away and Santos took over that role?

**Ms HUNTER:** I am not sure what date that happened. My recent memory is that Santos has been playing the secretariat role. I guess the other side of that is the questions were feeling a bit dissatisfied. The other side of it is that the departments—we were asking for departments to represent on different issues and there was a reluctance for the committee to push those forward. The third issue—

**The Hon. TREVOR KHAN:** Can you explain that a bit more?

**Ms HUNTER:** We were requesting for different departments to attend the meeting, but other CCC members and the chair were not enforcing that request through. So we were seeing less representation.

**The Hon. TREVOR KHAN:** When you say "not enforcing", they were not supporting the proposition?

**Ms HUNTER:** Yes, not supporting.

**Mr JUSTIN FIELD:** Would it be appropriate, Ms Hunter, for you to put the questions through us? We could ask them of Santos.

**Ms HUNTER:** Yes, absolutely.

**Mr JUSTIN FIELD:** Santos can choose to answer them or not. If that is useful, I am certainly happy to be a filter for that.

**The Hon. TREVOR KHAN:** Have these questions been put in writing?

**Ms HUNTER:** Yes, they have.

**The Hon. TREVOR KHAN:** So you have got them relatively to hand?

**Ms HUNTER:** Yes.

*[Interruption from gallery]*

**The Hon. TREVOR KHAN:** That is helpful.

**Mr JUSTIN FIELD:** I would like to ask a question about recommendation 12, which the Hon. Adam Searle brought up before. It seems that this is a critical point of contention. To be clear—this might be for you, Ms Woods—Santos and APPEA were here saying, "Implementation has been done bar two, which we are working on." I know that is contested; you might want to flesh that out a little more. On recommendation 12, which was for the establishment of an expert standing advisory body on CSG, we know at the time the Government said it supported that recommendation in principle. It has since said it will be left with the independent expert scientific committee. It is a Federal committee that was designed to inject itself into the planning stage of large coal mining and coal seam gas proposals, but the body that was proposed by the Chief Scientist was dramatically different to that. Do you think that was an acceptable response from the Government in terms of implementation and how you see that working, as you said, with the community on the front line of this battle?

**Ms WOODS:** We certainly do not think that the independent expert scientific committee in any way fills the functions of the standing expert committee in recommendation 12. The independent expert scientific committee already existed when that recommendation was made, so if it fulfilled that function the recommendation probably would not have needed to be made. It does have a wider role than the one you just described, though. It does not just do project-based advice; it also does the bioregional assessments, which are mostly nearing completion now. They have been a useful addition. There is one for the Namoi sub-region, which is a useful background for understanding the impact of coal and coal seam gas on water resources in the region. But the standing expert body was supposed to be a sort of feedback process of looking at data and looking at what the industry was doing and assessing things as they went and also providing advice on additional things, such as whether other forms of unconventional gas should also have buffer areas.

There are a whole bunch of functions which are in the recommendation, which I have in front of me. Updating and refining the risk management tool—I guess you could say the independent expert scientific committee does do processes for characterising and modelling sedimentary basins, that is probably what they did. But specific research that needs to be commissioned regarding coal seam gas: No. That is a pretty important area I think for a lot of people in our network because this industry is still evolving and the Chief Scientists' recommendations are five years old. With things like sulphate reducing bacteria or fugitive emissions or some of the health, the National Industrial Chemicals Notification and Assessment Scheme [NICNAS] has only been finalised after the Chief Scientist's review. There is a lot of evolving understanding that I think our view was this body was supposed to stay on top of and provide advice to Government about. That is just not being done.

**The Hon. ADAM SEARLE:** On a related topic, for example, there is also contested evidence we have received about the Whole-of-Environment Data Repository recommended by the Chief Scientist. She provided a lot of detail about what that was supposed to have, and the departments keep telling us about this SEED portal. I am not a subject matter expert but from what I can glean the SEED portal does not seem to do all of the things the Whole-of-Environment Data Repository was supposed to do.

**Ms WOODS:** No, and in fairness, it was a pretty utopian vision that she was planting of the Whole-of-Environment Data Repository. I have never known a thing like that to exist in relation to environmental

data and management, because the way the Chief Scientist was describing it, it gathered data from the industry, the public could input data and then it would be able to predict impacts and be responsive and everybody will get this dynamic thing that everybody was participating in.

**The Hon. ADAM SEARLE:** Nevertheless, that was the recommendation as far as I can recall and each of the Government and Opposition have signed up to it.

**Ms WOODS:** Yes. And I think one of the things that people struggle with a lot is the inaccessibility of data. Many of the Government agency datasets are plonked on that portal. They do not necessarily interact with each other in any meaningful way. That tool element of it where you can query and understand things dynamically is not really there. But the industry data does not tend to be there at all. Santos has its own website where it publishes data but that has been at times not updated for a couple of years I think, I cannot remember how long. It is not integrated into it and they do not require them to put their water quality data or other things into that portal, so it is certainly not serving the function of providing accessible information to the public about the environmental background and the status of the industry.

**The Hon. ADAM SEARLE:** That is a pretty important omission, is it not, in terms of the implementation. Has that even taken place?

**Ms WOODS:** It is a huge omission but I think it is also part and parcel of another one, which is the lack of baseline data. We would point to recommendation 13, for example, which is quite detailed in what the Chief Scientist was saying was necessary to understand the industry's likely impacts and then respond to them. Baseline conditions and data collection is the first step of that. That data portal cannot have that data because that data has not been prepared, produced, created, obtained.

**The Hon. ADAM SEARLE:** That being the case, then you cannot work out whether the industry can be operated safely, without having the information.

**Ms WOODS:** That is our belief, yes.

**The Hon. ADAM SEARLE:** In relation to recommendation 11, the risk management and prediction tool for extractive industries, again we have some mixed evidence about this. The Government agencies say they acknowledge they have not developed their own tool as recommended, but they say there are plenty of such tools that they use. The only one that has been specifically identified is the risk-based licensing system. That does not provide geospatial mapping or assessment, does it?

**Ms WOODS:** Not that I am aware of, no. It is not available to the public, it is an NTA internal designation of risk. I think it is a matrix. I do not think it is a spatial tool, no. You would need to ask them.

**The Hon. ADAM SEARLE:** Recommendation 11, as far as I can understand it, does seem to require the bespoke development by the State of a geospatial mapping tool so that you can feed in all the data, including from the repository, and work out the likely cumulative impacts of proposals. You can run a scenario, as it were.

**Ms WOODS:** Yes. That was certainly our expectation for what that recommendation was putting forward and I think a lot of people in our network would agree that is needed. I think it goes to the point—we have a lot of experience in the project assessment end of this world and there is a bit of model shopping that happens. The expectation ought to be that there is a consistent way of approaching and I think that is what that tool was supposed to supply, a repeatable and consistent approach to understanding groundwater risk, particularly, but a whole range of environmental risks.

**The Hon. ADAM SEARLE:** Again, that just has not actually happened?

**Ms WOODS:** It has not.

**The Hon. ADAM SEARLE:** You were saying a little while ago that there was the lack of that baseline data. If that is the case, recommendation 13 cannot possibly have been implemented either, that is the formal mechanism consisting of parallel steps. The steps are set out, I will not repeat them. Again, without the baseline data how can you begin to implement that recommendation?

**Ms WOODS:** Baseline data is absolutely essential to recommendation 13 and it does not exist. It is pretty disappointing that it does not exist, because as Ms Hunter mentioned, Santos has been in the perimeter for 10 years, so they have been doing a lot of testing and pulling up of water.

**The Hon. ADAM SEARLE:** They must have the data.

**Ms WOODS:** Well, I do not know. I do not know. There is not a network of monitoring wells that have sufficient spatial spread to reflect the geology underground, in our view. I think that view is also reflected in the Department of Industry-Lands and Water's response to Santos' Environmental Impact Statement [EIS] where they were concerned that there were only four monitoring wells in the Permian aquifers, which is the Gunnedah-Oxley Basin that Ms Woods mentioned. There has been a lot of attention on the Great Artesian Basin. Rightly so, it is a productive aquifer, but the Gunnedah-Oxley Basin is used by agricultural businesses around the area and it is generally not really very well understood or described in the EIS and the attention that has been paid to it so far, there is no baseline data.

**The Hon. ADAM SEARLE:** The Government's position is that all of these recommendations have been implemented bar four and nine, but we have just discussed 10, 11, 12 and 13, and to the best of your knowledge—

**Ms HUNTER:** And two.

**The Hon. ADAM SEARLE:** —and two.

**Ms HUNTER:** That is the communication one.

**The Hon. ADAM SEARLE:** To be fair, I guess communication, whether that is effectively done is a subjective matter—he said, she said—people can legitimately differ, but whether there is a particular tool that meets a certain description is an objective fact.

**Ms WOODS:** Yes. I think the recommendations are complicated.

**The Hon. ADAM SEARLE:** Sure.

**Ms WOODS:** But they are very specific, and that helps us understand that they have not been implemented, because you can read it and you can say: No such thing as this exists.

**The Hon. ADAM SEARLE:** And, as you say, they are complicated, no doubt time consuming and expensive. We are now in the sixth year since Government committed to implement it.

**Ms WOODS:** Yes. We are very disappointed that the response dropped after about 2016 or so. There has not really been, as far as we have observed, much progress on any of this since then. This was what the Chief Scientist said was necessary in order to, firstly understand, and then mitigate and prevent the environmental damage that this industry can do. This is why people do not have confidence, because it is not there.

**The Hon. ADAM SEARLE:** But more fundamentally, there has been this sort of dialogue around these recommendations. Some people say these recommendations will tell us how to do searches. Others, including myself on the record, said they will tell us whether or not they can be done safely.

**Ms WOODS:** Yes.

**The Hon. ADAM SEARLE:** And it is that second part that is quite important. Your evidence is that the basic building blocks to tell you that information does not exist?

**The Hon. ADAM SEARLE:** Yes. We entirely agree and we would say that if all of this had been implemented we may well have come to the conclusion several years ago that the southern recharge of the Great Artesian Basin is not an appropriate place to have an industrial gas field and we would have saved ourselves a lot of conflict and waiting.

**Mr JUSTIN FIELD:** To that, because depending on how the Narrabri Gas Project goes, we could be back there with a bit more interest around other parts of the State. Recommendation 5, in which the Government's response to any gas plan was in part the strategic release framework, how they were going to make decisions about where gas is appropriate in the future, obviously that is something that will apply if there are new applications for exploration licences but there are a whole heap of sleepers out there. We know the Deputy Premier has quite famously described them as zombie petroleum exploration licences [PELs] and has threatened to tear them up, but that has not happened. The Government has said it will consider the status of those expired PELs after the Narrabri decision. Do you think that is an acceptable circumstance, and how would you prefer to see the question of those expired PELs dealt with?

**Ms WOODS:** We always understood recommendation 5 to be a recommendation that there be a statewide process of land use analysis that examined the water resources, the soils, the existing land uses, the capabilities, the biodiversity, and which said, "there are constraints here that ought to apply". But that was never done and, as Ms Hunter referred to, there was a limited area of no-go zones, which already existed before the

Chief Scientist made this recommendation. I suppose you are talking about the petroleum exploration licences [PELs]. We have been disappointed that the strategic release framework was not applied to existing licences and their renewal process.

The strategic release framework certainly has limitations and it does not fulfil these recommendations in the sense that it is a ministerial discretion, where it was supposed to be the standing expert body, I believe, that was carefully designating. The role of a Minister in this is always going to be troublesome and political and that is not appropriate so we have things to say about the strategic release framework. But at least it did purport to do the triple-bottom-line upfront investigation spatially of whether areas were appropriate to release for exploration for coal and gas. The whole of the 4½ million hectares of the north-west that is under expired petroleum exploration licences has never been subject to that process.

**Mr JUSTIN FIELD:** And it would be your preference that it would be subject to that process, despite your reservations about how sufficient that process is to meet the Chief Scientist's recommendations?

**Ms WOODS:** Yes. The stop and reset of the NSW Gas Plan back whenever it was—2014 or 2015—ought to have meant that those old expired licences were no longer valid and we would begin again.

**Ms HUNTER:** Can I make a note on those expired PELs? In a practical sense for people who live in the region there is a lot of uncertainty about investment decisions for new properties and even for infrastructure on people's places and things. They are taking into account that these PELs are still sitting there. I know that the industry cries out for some security and swifter decisions so that they can make investment decisions but landholders also have those same concerns.

**Ms ABIGAIL BOYD:** Ms Woods, in your submission you talk about the economics of the east coast gas market and how the opening up of the export of gas has irreversibly shifted the pricing we now have—it has gone from \$3 to \$10. You say that it looked like a deliberate corporate strategy of Santos. Are you referring to the profits that Santos reaped from that increase in price on the exporting?

**Ms WOODS:** The increase in price raised the value of Santos' gas assets across the board in the eastern gas market, so it was not just that they were able to get more dollars per molecule but the value of their assets was increased as a result of the gas price increase. That is not my take, I think it was Credit Suisse, who I quoted in our submission, who said it looked like a deliberate strategy of Santos to do that.

**Ms ABIGAIL BOYD:** You heard the conversation I had with Santos in relation to the impact of the import terminals on their export business. I felt that they laid out quite well the absurdities of this export/import situation we have. Do you agree that there appears to be little benefit to gas prices and overall electricity prices from opening up Narrabri?

**Ms WOODS:** We have never seen any information produced by Santos, or the Government or any of the other people who regularly talk about this in the media to substantiate the claim that the Narrabri Gas Project is going to reduce gas prices in New South Wales. There was a report done by one of the resource agency finance people but from the way that they were discussing it I think that they were referring to the exploitation of the entire Gunnedah Basin when they were talking about the impact of additional supply. From what we have seen, the higher production cost of Narrabri and its relatively small size compared to the eastern gas market as a whole and the export industry—I am not an economist but I do not understand how a small amount of high priced gas could possibly bring down gas prices. The impact of the liquefied natural gas [LNG] export industry and the coal seam gas export industry in Queensland has been felt throughout eastern Australia, particularly by the manufacturing industry, with high gas prices, but also high electricity prices now because gas is increasingly setting the price of electricity.

I think it is illustrative of what happens when governments make decisions based on inadequate, piecemeal information provided to them by resource proponents because the Queensland Government and the Australian Government did not foresee the cascading economic consequences of opening up export coal seam gas from Queensland, which is hurting people and businesses in New South Wales. In fact, one of the environmental impacts statements [EIS] for those processes boldly claimed that there wouldn't be any impact on price and there would not be any impact on gas users in the domestic market. This really does highlight for us that governments rely on industry proponents to provide this information to them and the information is often not interrogated. We then end up with everybody else suffering the consequences because there is insufficient architecture scrutiny and interest in taking an objective view.

**The Hon. ADAM SEARLE:** Or the information just turned out to be wrong.

**Ms WOODS:** Yes, but it is wrong towards a specific agenda.

**Ms ABIGAIL BOYD:** This inquiry is tasked with looking into whether other things have arisen since the Chief Scientist's report that would lead to her recommendations being unsuitable or ineffective. You have touched on that in your submission and this is why this discussion around gas prices becomes relevant. Are there other major new developments that you think the Chief Scientist would have perhaps taken into account if they had occurred at the time that she was writing the report?

**Ms WOODS:** Yes, the one I forgot to put in our submission that I mentioned in my opening address is the NICNAS chemical assessment. That was another Government process that began in a great flurry of attention to coal seam gas at the end of 2011—I cannot remember the exact date—and then fell off the to-do list. A lot of the work for that was done prior to the Chief Scientist's recommendations being made but the report itself was not released until 2016 or 2017. NICNAS surveyed all of the chemicals used in the drilling process and other parts of the coal seam gas process and found that 30 of them were not already listed as hazardous substances in the information system so they did not already have a way of handling and an assessment done for them. There were 57 hazardous chemicals that they assessed and they looked at exposure pathways for workers and the public in the transport and use of those chemicals. None of that was produced and published before the Chief Scientist's recommendations were made.

**Mr JUSTIN FIELD:** Of those ones that were not previously assessed, have they now been assessed?

**Ms WOODS:** I do not know.

**Mr JUSTIN FIELD:** That was not specified in the NICNAS report?

**Ms WOODS:** NICNAS made recommendations that work health authorities do that job but I am not sure if it has been done.

**Mr JUSTIN FIELD:** And we do not know if that has been incorporated into health and safety rules on sites in New South Wales or chemical handling procedures or groundwater monitoring assessment processes?

**Ms WOODS:** I do not know and I think that is one of the concerns people have about coal seam gas—the degree of opacity. There are a lot of chemicals being used and there are exposure pathways and the cement casings degrade over time and those substances remain in the environment and many of them are new—they are invented polymers held under intellectual property by companies and so it is unexplored territory in terms of environmental and health consequences.

**Mr JUSTIN FIELD:** I had a question about recommendation 7, which I think is one of the key ones putting the NSW Environment Protection Authority [EPA] as the lead regulator of coal seam gas in New South Wales. There was some media reporting late last year suggesting that there had been a bit of a change within the environment branch and potentially the EPA to see the coal seam gas-specific branch consumed into another element. I do not know the facts of that. You are one of the peak bodies that has been working with community groups to look at these issues. What has your relationship been with the EPA as the lead regulator?

**Ms WOODS:** I suppose we have been pretty disappointed in the EPA and it crosses across many of the recommendations but recommendation two in terms of provision of information. It has been difficult to get information and I think there is a culture of allowing Santos to be the holder of information and the distributor of information rather than that information being held by the Government and given to the public on request. Since the Chief Scientist's recommendations were made there has been a lot of churn in the agencies.

I think there has been three—maybe even four—restructures and reassignments of the water agency, for example. So it is hard for the public to know who to talk to. There was a gas branch in the EPA. I have not heard from them that they have been abolished but they may well have been if *The Sydney Morning Herald* is to be believed. People need to know who to ask questions of and it is very difficult when there is a lot of restructuring and churn in the public service. I am not sure if the EPA has sufficient resources to do this properly but it is underwhelming I suppose I would say.

**Mr JUSTIN FIELD:** People mostly think of the EPA in terms of compliance, in incident responses to chemical spills and the like. Have any of your members or supporters who have tried to reach out to the EPA or report incidents, have they had feedback on investigations and regulatory responses?

**Ms WOODS:** Yes people do report things to the EPA and as Ms Hunter implied in what she was saying, there is a tendency to treat people as cranks and try and brush them aside. I think it is a feature of not having much

information about what exactly Santos is doing and which wells are producing. I asked the EPA how many of the gas wells in the Pilliga are currently producing gas and they could not or would not tell me. They were like you should ask Santos. And it is like, you should know that and if you do know it by would you not just tell me. And if you do not know it, that is a problem if you are the lead regulator. So people do ask questions and they get sort of—. What is the word for it?

**Ms WOODS:** Belittled?

**Ms HUNTER:** Belittled, yes. There is a real sense that asking questions about this industry puts you into some sort of troublemaker category and it is not our experience that it is a small number of people who want to know. There is a lot of desire to understand what this industry is doing and what effect it can have on people. So yes, we have been disappointed by the EPA.

**Mr JUSTIN FIELD:** In answers to questions on notice, I asked some questions about the EPA's annual report that mentioned some gas leaks had been identified. It was unspecified, I asked questions, they came back and said there had been eight gas leaks I think at Santos operations in the last 12 months and a number of those seemed to still be ongoing. Were you aware of those gas leaks Ms Hunter as a group that had been on the CCC?

**Ms HUNTER:** No. I am not personally on the CCC so I can get back to you and confirm with the member who is on the CCC just to be sure. But I do not recall it in our reporting.

*[Interruption from gallery]*

**Mr JUSTIN FIELD:** That is the member that was on the CCC. Thank you.

**Ms HUNTER:** Just following on from Ms Woods' point with the EPA. The community has seen over time that are these spills, there are leaks—we have had more than a dozen spills and leaks in the Pilliga—and I think we could count on one hand the number of those that were discovered by the EPA. It does require this kind of citizens science approach all the time to just be seeing what is going on because—for whatever reason—the EPA does not seem to be the person on the street so to speak.

**Ms WOODS:** What we want from them is for them to be glad that people are interested in their work. To be glad that people are interested in the environment that they live in and the air that they breathe. To be encouraging and responsive when people notice canisters dumped on the side of the road. They go to the EPA and say, "what is this, why are there canisters dumped on the side of the road?" And they get this sort of stonewalling response. Yes it is disappointing.

**Mr JUSTIN FIELD:** There are only two gas fields in New South Wales. One in Camden and one at Narrabri. Do you have a single point of contact with the EPA up there?

**Ms HUNTER:** There is now an EPA office in Narrabri that has three staff I think.

**Ms ABIGAIL BOYD:** Ms Hunter, how would you describe the emotional impact on the community of being faced with such secrecy and lack of transparency from the industry and from Government?

**Ms HUNTER:** I do not know if I have the right adjective. It becomes over time very stressful. People have been looking at the industry for a long time and wondering what the impact is going to be and trying to find out what they would be. When you ask these questions and you are treated with disdain it is emotionally damaging and different people have felt the stress of that extremely intensely over the years.

**Ms ABIGAIL BOYD:** And it has been 10 years right?

**Ms HUNTER:** Yes. Probably even more. And I guess that is the thing with recommendation two. We could put our questions through you Mr Field—and thank you for the offer—and we could certainly get the answers to the questions. I guess that is not actually really the important point. This clearly says that there should be open communication with the community and that is not happening.

**Mr JUSTIN FIELD:** I understand the point certainly. If the Narrabri Gas Project is approved I assume the CCC will remain and there will be ongoing needs to engage with the community over its operations. What would it take for you to re-engage with the CCC?

**Ms HUNTER:** There is a big role to change the way the chairmanship role is played.

**Mr JUSTIN FIELD:** Who is the current chair?

**Ms HUNTER:** Mr Jock Laurie or he was the previous chair, I beg your pardon. It is now, what is his name? He has only been there for one meeting and that was the meeting that we suspended our involvement.

**Mr JUSTIN FIELD:** Is it a Government representative, the chair?

**Ms HUNTER:** Yes. Well the previous one was the NSW Land and Water Commissioner who is a Government representative.

**Mr JUSTIN FIELD:** So what would it take—sorry I cut you off?

**Ms HUNTER:** Some changes to the chairmanship certainly. Some changes to—.

**The Hon. TREVOR KHAN:** Sorry. Changes to the chairmanship. Does that mean a new chair or does it mean that the chair behaves in a different way?

**Ms HUNTER:** Whichever works best for the community I would say. The way it is working now is not working and changes need to be made. It is not for me to determine if that is a person thing or a process thing. I would like to think processes could fix it but I do not know.

**Mr JUSTIN FIELD:** And with regards to the Secretariat?

**Ms HUNTER:** There has been some issue about the transparency in the Secretariat and the communication so they are process things that could be fixed. Again that role is currently run by Santos and I do not think that is an appropriate position. It should be an independent Secretariat. That would help.

**Mr JUSTIN FIELD:** It used to be that the Government held the Secretariat role. Was that through resources or EPA?

**Ms HUNTER:** I am not sure.

**Ms WOODS:** It is a different job to the CCC to the others. This was established as part of the exploration projects so I imagine it was probably resources and geosciences but I am afraid I do not know.

**Mr JUSTIN FIELD:** I will ask the Government.

**The Hon. TREVOR KHAN:** Can I just ask in that regard? Are we certain that it was because Mr Field's questions seem to have posed on a number of occasions that it has changed. That the Secretariat has changed from the Government to—.

**Mr JUSTIN FIELD:** That was in the submission. That is where I pulled that but I just was not sure in what way.

**The Hon. TREVOR KHAN:** Maybe we do not have the answer here but it seems to have been a point of contention and I am just wondering what that change in dynamic was? What that change in personnel was for instance and when it was?

**Ms HUNTER:** I cannot shed light on that sorry.

**The Hon. TREVOR KHAN:** That is alright.

**Ms HUNTER:** Can we ask the audience?

**The CHAIR:** No we cannot.

**Mr JUSTIN FIELD:** I will inform the Committee of the submission that they might like to read which includes some of that information.

**Ms HUNTER:** The minutes are all publicly available so if one could be bothered one could trawl back through the minutes and find out when the Secretariat changed.

**The Hon. TREVOR KHAN:** Sure.

**The Hon. ADAM SEARLE:** It is a pretty important point.

**The CHAIR:** Any further questions?

**Mr JUSTIN FIELD:** I might just ask if there is anything else that you would like us to hear or know?



**Ms WOODS:** I did react a little bit in the discussion about Santos' commitment to not frack in the Pilliga because they have already conducted hydraulic fracturing in the Pilliga. The notion that these damaging activities can be managed with conditions of a development consent raises my hackles, because conditions of development consents are frequently changed when they become inconvenient for the proponent of the mine in question. That happens a lot in the coal industry. Obviously we do not have a whole series of coal seam gas development consents, but I think the Camden consent has changed a few times. The idea that you can set a condition at the outset and that is going to mean that for 25 years this is how it is going to work is really not something that I think the Committee should rely on.

**The Hon. TREVOR KHAN:** I was not suggesting that. But at this stage, oral evidence given to a committee of what is the intention of a company is probably of little weight.

**Ms WOODS:** Yes.

**The Hon. TREVOR KHAN:** It seems to me there needs to be some greater formality to such a representation.

**The Hon. ADAM SEARLE:** I could not have put it better myself.

**Ms WOODS:** A ban on fracking in New South Wales would ensure—if we think that fracking is something that ought not to occur, which is the tone of the conversation, it is good that Santos has said it is not going to frack and how everybody is reacting. If we think it is good that Santos is not going to frack, then a ban on fracking would ensure it is not going to. A condition saying "Don't frack" is not going to do that because my experience in the Hunter mining industry is that conditions of consent that become inconvenient if the mine plan changes or if the resource economics change are very, very easily altered.

**The Hon. ADAM SEARLE:** On that, should we approach any condition proposed about any legal obligation of only selling the gas into the New South Wales market? At the moment, I think Santos was not entirely clear whether it has actively sought that condition. It has said that it would accept one; it has not said whether it has asked for it. Either way, if it became inconvenient or if Santos felt it became uneconomic, it could seek a modification.

**Ms WOODS:** Definitely. But even before that occurred, I do not understand how you could make such a condition because New South Wales does not have a discrete gas market. New South Wales is part of the eastern gas market. The Moomba pipeline goes to South Australia and Queensland and Victoria.

**The Hon. ADAM SEARLE:** So you are saying how could you ever enforce it?

**Ms WOODS:** How could you even make such a commitment? You could do it retrospectively and say, "How much did we supply to these commercial entities in New South Wales?" But they are all molecules flying around. I think the whole notion of saying New South Wales imports gas from other States is kind of a political invention of this discussion, really.

**The Hon. ADAM SEARLE:** Because there is one east coast market?

**Ms WOODS:** Yes, there is one east coast market. We are not importing gas; we are just moving gas around eastern Australia. There has long been a lot of concern in the north-west that the gas will be exported. The reason for that concern, I think, is—it does not really matter; it does not change the impact that people experience from the industry, but it does, I suppose—

**Ms HUNTER:** I think it counteracts what we have been fed to believe in a patriotic manner that we are supplying gas for New South Wales. That makes people feel warm and fuzzy. When the reality could be that it is just for export, it takes away that justification and you do not feel quite so patriotic about the whole thing.

**Mr JUSTIN FIELD:** Is it not also to create an assumption in the minds of people that if we have more gas in Australia, gas prices will be cheaper?

**Ms WOODS:** Yes.

**Mr JUSTIN FIELD:** That is part of it, right?

**Ms WOODS:** That is the frame. It is very frustrating.

**Mr JUSTIN FIELD:** It has been fully refuted.

**Ms WOODS:** We are producing record quantities of gas in eastern Australia. We are reaching record production levels. There is absolutely no shortage of gas in eastern Australia. There are unsustainably high prices, which is driving the manufacturing industry into the ground and risking a great number of jobs, and Santos is the architect of that disaster.

**The Hon. ADAM SEARLE:** Because of its export platform?

**Ms WOODS:** Because of its export industry and because Santos's export industry, particularly, overcommitted in its export contracts. Therefore Santos had to start selling its South Australian gas through its export terminals because its coal seam gas fields in Queensland did not produce what it was expecting them to produce, which is the other difficulty with relying on Narrabri gas to supply this 70 petajoules we have now promised the Commonwealth. We do not know what Narrabri gas is going to produce because coal seam gas is very, very hard to predict beforehand. Santos is the architect of that and, of course, we cannot put that genie back in the bottle.

I would say this goes towards the reliability of that company as an economic actor making promises to this State when, really, it has from the beginning acted in its own interests. It is not concerned about manufacturing jobs in western Sydney. Our view of it is that gas is unsustainably high-priced and is also part of the greenhouse gas problem that is now seriously hurting people in New South Wales. If we want our manufacturing sector to survive, we need to invest very strongly in renewables with storage to convert our manufacturing sector over so that it can have low-cost reliable energy that is not doing all this damage.

**The CHAIR:** Thank you very much for your input and your candour.

**(The witnesses withdrew.)**

**(Short adjournment)**

**JAMES MCTAVISH**, NSW Regional Town Water Supply Coordinator, on former oath

**KEVIN RUMING**, Director, Strategic Resource Assessment and Advice, Division of Resources and Geoscience, on former affirmation

**MICHAEL WRIGHT**, Deputy Secretary, Resource and Geoscience, Department of Planning, Industry and Environment, on former affirmation

**ANTHONY KEON**, Executive Director, NSW Resources Regulator, affirmed and examined

**MITCHELL ISAACS**, Director, Office of the Deputy Secretary and Strategic Relations (Water), on former affirmation

**RICHARD BEAN**, Interim Chief Executive Officer, Environment Protection Authority, affirmed and examined

**CARMEN DWYER**, Executive Director, Regional Operations, Environment Protection Authority, sworn and examined

**ANDREW COWAN**, Program Manager Environment Protection Authority, affirmed and examined

**MELANIE HAWYES**, Deputy Secretary, Policy Strategy and Science, Department of Planning, Industry and Environment, affirmed and examined

**The CHAIR:** We will proceed straight into questioning.

**Mr JUSTIN FIELD:** Ms Dwyer, this might be for you. In media reporting in early January an article in *The Sydney Morning Herald* suggested:

staff have [also] been left unclear how the recent abolition of separate teams overseeing the coal seam gas industry and enforcement of forestry regulation will affect their roles.

The story was in regards to the loss of a senior staff member within the department. Can you clarify for the Committee what the status is of the coal seam gas [CSG] team within the NSW Environment Protection Authority [EPA]?

**Ms DWYER:** The NSW EPA is currently—

**The Hon. TREVOR KHAN:** Before you continue your answer—because we will get a complaint from the back of the room—are you able to bring your microphone closer?

**Mr JUSTIN FIELD:** And I did not mean to select who answers the question so whoever is the most appropriate person to answer, please go ahead.

**Mr BEAN:** Ms Dwyer is perfectly appropriate.

**Ms DWYER:** The NSW Environment Protection Authority is going through a realignment; however, all of the staff and the specialties of the coal seam gas team still exist—the gas division. Those staff are still within the EPA and undertaking their existing functions.

**Mr JUSTIN FIELD:** Is it still a separate team? Do you have a current outcome for what the restructure looks like?

**Ms DWYER:** We are working through that realignment at the moment but it is not a dedicated team.

**Mr JUSTIN FIELD:** When do you think that will that be finalised?

**Ms DWYER:** I do not have a hard date on that. We are working through those processes.

**Mr BEAN:** It is a work in progress.

**Mr JUSTIN FIELD:** That sounds ominous.

**Mr BEAN:** No, the important point is that it has no effect on the functions of the team doing this work. They are there, the expertise remains; there will just be a change to the org chart as to where they appear. The realignment has been designed to improve the way that all of the teams in the EPA function and are able to perform their duties. That there is not a team with that name does not have any effect on them performing their duties.

**Mr JUSTIN FIELD:** Will it still be 23.2 full-time equivalent?

**Mr BEAN:** It is at the moment.

**Mr JUSTIN FIELD:** Do they only work on coal seam gas related matters or do they work on other things?

**Mr COWAN:** I can take that. They will largely be working on coal seam gas matters; however, as they have capacity they will also work on other areas across the EPA—they would be doing inspections, amongst other things.

*[Interruption from gallery]*

**Mr JUSTIN FIELD:** You might need to bring the microphone closer to you.

**Mr COWAN:** Would you like me to repeat my answer?

**Mr JUSTIN FIELD:** Yes, please.

**Mr COWAN:** Could you repeat the question?

**Mr JUSTIN FIELD:** My question was, "Do they only work on coal seam gas?" But I will extend that and you can continue and answer the second question, as well: Once it is restructured, will it change the amount of time they will likely be working on coal seam gas?

**Mr COWAN:** I will answer the first one. They would be largely working on coal seam gas activities. However, as their time is available they would be assisting other areas of the EPA working on other matters.

**Mr JUSTIN FIELD:** Who decides the prioritisation of the work of that team?

**Ms DWYER:** The priority work of that team is always coal seam gas. If there is any matter around coal seam gas that needs to be acted on, that is their first piece of work. It is only should they have capacity because there is not a piece of coal seam gas—for instance, if one of the hydrogeologists is not working on a particular hydrogeological assessment, then they may be available to support the rest of the agency.

**Mr JUSTIN FIELD:** Thank you, that clarifies that.

**The Hon. ADAM SEARLE:** Mr Wright, I do not know if you are the appropriate person or whether anyone here can answer this. Earlier today we heard from Santos and they were asked a question about whether Santos has actively sought, in its application for the Narrabri project, conditions of consent that would legally bind it to only sell any gas product into the New South Wales market and ban it from using hydraulic fracturing. Can you either now or on notice inform the Committee about whether it has actively sought either or both of those conditions?

**Mr WRIGHT:** I am not in a position to inform the Committee today but I will take it on notice. It will be a matter for our planning and assessment division.

**The Hon. ADAM SEARLE:** I look forward to hearing from it. In relation to the evidence you gave on the last occasion there were a number of recommendations that the Government says have been implemented. But on closer inspection, I think—trying to put this neutrally—the Government has responded to but has not implemented. I will start with the expert advisory body on CSG. The Government has not implemented the Chief Scientist's recommendations to create a body that she said in her recommendation would have those functions. Instead, I think it was your evidence Mr Wright, that the Government is using the Commonwealth independent expert scientific committee. I think the evidence really was that the work of that Federal body does not do the work that was envisaged by the Chief Scientist. Do you agree with that characterisation? And, if not, how are those functions that the Chief Scientist said should be done by this independent scientific body—who is doing them?

**Mr WRIGHT:** The Government response to the Chief Scientist Engineer's recommendation was that it would consider the best way to harness expert advice and, having looked into the matter, determined that it would rely on the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development for that purpose, in addition to—as I think I said when I gave evidence last—Gas Industry Social and Environmental Research Alliance [GISERA].

**The Hon. ADAM SEARLE:** Without wanting to fence with you, that is a different to implementing the Chief Scientist's recommendation. Are you prepared to accept that as a commonsense approach?

**Mr WRIGHT:** The Government's response to the Chief Scientist's recommendation was that it would consider the best way to harness expert advice. That was its response.

**The Hon. ADAM SEARLE:** Actually, the Government's stated response—and repeatedly since 2014—is that it would implement all of her recommendations. That has just not happened, has it?

**Mr WRIGHT:** The Government's response to the Chief Scientist's recommendations is set out in the NSW Gas Plan.

**The Hon. ADAM SEARLE:** Okay. I understand you are a public servant so I cannot take this any further. In relation to regulating and supporting the industry, I think on notice someone indicated that the EPA's regulation budget for 2019-20 was \$3.75 million and the resources regulator expects that its costs associated with regulating the New South Wales upstream petroleum industry would be \$535,000. Can you inform the Committee what steps the Government is currently taking to recover those costs that are being incurred, in line with the recommendations of the Chief Scientist?

**Mr KEON:** I can speak to the resources regulator. All our functions are currently 100 per cent cost recovered from industry. All our safety-related activities are recovered from the Mine and Petroleum Site Safety (Cost Recovery) Act, which is the mine safety levy. Anything we undertake on the other side of the business, which is primarily under the Mining Act, is all fully cost recovered from the administrative levy.

**The Hon. ADAM SEARLE:** How are you recovering the \$535,000 that you incur regulating the New South Wales upstream petroleum industry?

**Mr KEON:** That is under the Mine Safety Levy. That is fully cost-recovered.

**Mr JUSTIN FIELD:** Just to be clear, the \$3.75 million, I think, is allocated from within the EPA. None of that, if I am reading correctly the answers to questions on notice, is currently cost-recovered. Is that correct?

**Mr COWAN:** A small portion of it would be cost-recovered.

**Mr JUSTIN FIELD:** How is it cost-recovered?

**Mr COWAN:** Through licensing fees.

**Mr JUSTIN FIELD:** Any idea how much those licence fees would be?

**Mr COWAN:** It would be in the order of tens of thousands of dollars.

**Mr JUSTIN FIELD:** Compared to \$3.75 million?

**Mr COWAN:** Correct.

**The Hon. ADAM SEARLE:** Again, the question is when can we expect that those costs will be recovered?

**Mr COWAN:** There is a piece of work that is happening across the Department of Planning, Industry, and Environment cluster, exploring gas cost recovery.

**The Hon. ADAM SEARLE:** What is the time horizon for doing that?

**Mr BEAN:** As I understand, information was provided previously in estimates that we expect that there will be options for a cost recovery framework in this financial year.

**Mr JUSTIN FIELD:** Is it expected that that will recover historical costs, or will that just recover costs going forward?

**Mr BEAN:** I do not know the answer to that question.

**Mr JUSTIN FIELD:** Back to some of the answers to questions on notice, Mr Bean—or whoever from the EPA that is appropriate—from the answers to my questions on notice, there seems to be a suggestion that with regards to rehabilitation work and rehabilitation sign-off for a number of petroleum exploration licenses [PELs] that have been cancelled or for wells that have been decommissioned, that the EPA had done that work and had signed off on a large number of PELs and wells. It mentions that no groundwater monitoring activities are conducted as part of the rehabilitation work. Can you confirm that that is correct—no groundwater monitoring activities are conducted as part of rehabilitation work?

**Mr COWAN:** The groundwater monitoring is conducted throughout all our compliance activities. We have two specialist hydrogeologists on staff to look at groundwater monitoring data, and they are assessed through the life-cycle of those wells.

**Mr JUSTIN FIELD:** What did it mean, then, when you answered those questions? I do not mean you—someone obviously did. This is why I was trying to clarify. I asked the very specific question about groundwater monitoring activities as part of rehabilitation. The specific answer came back that no groundwater monitoring activities are conducted as part of rehabilitation work. Can you clarify what the distinction there is?

**Mr BEAN:** Would you mind referring us to the particular question?

**Mr JUSTIN FIELD:** It was answer number 12, I think. It was either 11 or 12. I do not have the answers on notice right in front of me.

**Mr BEAN:** It is 12.

**Mr COWAN:** It would likely be to the—

**Ms DWYER:** Sorry, 12 referred to 11, which was about the Government's buyback. I am just clarifying that.

**Mr JUSTIN FIELD:** Yes, it was about the rehabilitation that happened for those PELs and the wells that were on those PELs that were either bought back or had been cancelled as part of the significant reduction in petroleum activity.

**Ms DWYER:** The buyback piece is different to the rehabilitation piece that is undertaken through a normal well closure or completion report. I do not know if anyone has any further information about the lease buybacks.

**Mr WRIGHT:** There was a PEL buyback program run by the Government where holders of PELs were asked to voluntarily apply to have their PELs purchased back by government.

**Mr JUSTIN FIELD:** I understand that. I do not want to confuse it; maybe I can speak offline to someone about this. In the answers to those questions—these are your words. I have paraphrased them slightly but they are in the answers.

**The Hon. TREVOR KHAN:** No, use the words rather than paraphrasing.

**Mr JUSTIN FIELD:** I have just got the question. I did not realise this was going to be contentious, because the answers are right there. The EPA has endorsed the rehabilitation of 140 wells covering the 20 petroleum exploration licenses that were bought back by the New South Wales Government. The answer seemed to suggest that no groundwater monitoring or assessment was conducted as part of the rehabilitation endorsement process. I am assuming that the EPA signs off on the sufficient rehabilitation of these sites. I am wondering if there is any sort of understanding of the groundwater impacts or a baseline that is taken at the time that that endorsement is given.

**Mr COWAN:** I think the distinction there would be—I think that they have particularly pulled that point out just to refer that the rehabilitation is post decommissioning and it is largely about surface infrastructure, whereas through the life cycle groundwater monitoring does occur.

**Mr JUSTIN FIELD:** Then, just to move onto the next question, obviously at some of these sites there were exploration activities going on. Some, I think, were even extracting gas for purposes of testing the viability in them, and that might be specifically with regards to Gloucester. Is there any post-rehabilitation, post sign-off groundwater monitoring at any of those sites?

**Mr ISAACS:** From a broader groundwater monitoring perspective, we do not undertake site-specific groundwater monitoring. That falls within the roles of the regulators and the proponents. But we undertake a broad groundwater monitoring program.

**Mr JUSTIN FIELD:** Who are the regulators in that answer? I assume you are talking about EPA.

**Mr ISAACS:** Yes.

**Ms DWYER:** I think there is probably confusion about a couple of different spaces, so if it is helpful—

**Mr JUSTIN FIELD:** It would be helpful because this was one of the most contentious issues: groundwater impact. And there are the insurance impacts. What happens after the fact if there is a consequence of activity? I am trying to understand exactly what the rehabilitation process is.

**Ms DWYER:** I will try and give that, and if I have misunderstood the question—I will start and then Mr Cowan might be able to provide some more detail. When a well is constructed under the new framework since the EPA has been the lead regulator, there is a code of practice about how it is to be decommissioned. Every well that is decommissioned has to comply with that code of practice. The EPA goes through and checks a variety of different things to ensure that it is meeting that code of practice. The kind of things that are in that code of practice—I am going to have to hand over in terms of the detail, if you would like.

**Mr JUSTIN FIELD:** We went through that in the last questions. That is fine. Am I taking from what you are saying that if they have complied with the code of practice, the assumption is that the integrity of the well is fine and that we will not have a groundwater issue after the rehabilitation and sign-off of that gas field or well?

**Ms DWYER:** The design of the code of practice is aimed to ensure that if it is signed off in line with the code of practice, there is no ongoing risks.

**Mr COWAN:** Those codes are in line with international standards and all the international standards are the same.

**Mr JUSTIN FIELD:** At the last hearing, the clear answer was given that in the event that there is an issue after the fact, it is the proponent—the person who had drilled the well—who is responsible for any issues associated with that well. How would a landholder possibly be able to address those issues with a gas company that may well not be in existence anymore? If there is no monitoring that is being done on an ongoing basis by the lead regulator for this industry, how does that work in practice? I know we have not seen that yet, but how would it work?

**Ms DWYER:** The environmental risks are considered so low at post if the rehabilitation has been conducted in line with the code of practice. However, at that point there is a whole broader regional groundwater monitoring network.

**Mr ISAACS:** We have a broader groundwater monitoring network that, at a regional scale, is designed to be able to detect broad changes and trends within groundwater sources.

**Ms DWYER:** The principle still applies that the polluter pays. If there is a detection, it can be investigated and traced and action taken.

**Mr JUSTIN FIELD:** I have one more on the questions on notice. In the EPA's answers to questions on notice, you identified a number of leaks that had been identified over the past 12 months. I asked a question based on the annual report. Eight were related to Santos's operations. Your response stated:

... six were identified as occurring as a function of the L2 controller component operation, which is a component of the well surface infrastructure. The EPA is currently working to determine whether this release of gas is an acceptable practice for this component of the well surface infrastructure ...

Are those leaks still active?

**Mr COWAN:** I can confirm that we have a broad compliance checking framework. As part of our leak detection and repair program, we identified some releases from those particular components. Santos explained that they were designed in that particular manner, so we went through a process over a number of months monitoring those equipment and following up and doing our due diligence just to find out whether that was, in fact, the case. We have just recently confirmed that those particular components were actually releasing as they were designed to do, with small amounts of gas being released as part of their operation. So they are not, in fact—

**Mr JUSTIN FIELD:** But there was enough gas for you to identify.

**Mr COWAN:** Largely because we now have innovative new technologies to be able to identify these leaks. They are very minor.

**Mr JUSTIN FIELD:** So how much gas would you be talking about?

**Mr COWAN:** I would not be able to give you the specifics but it would be very small.

**Mr JUSTIN FIELD:** And without a well engineering lesson what is the ELF 2 controller?

**Mr COWAN:** It is a component of the well head. It is part of the gas separation.

**Mr JUSTIN FIELD:** Okay. Thank you.

**The Hon. TREVOR KHAN:** Does that satisfy you as an explanation? That it is a component of the well head.

**Mr JUSTIN FIELD:** Probably would have been useful in the annual statement not to just leave a question mark hanging there.

**The Hon. ADAM SEARLE:** A question for the EPA. In answers to questions on notice around recommendation nine to do with insurance, responses to the Committee said that the EPA was consulting with the insurance industry and other parts of industry to assess whether existing insurance products and frameworks are adequate. From the evidence we have had it is pretty clear there is no insurance product that people can access or buy to insure against risk from coal seam gas. Is that confirmed by your investigations?

**Mr BEAN:** It is true that we consulted with the insurance industry during that process and we also consulted with the gas industry itself and community groups and other Government agencies and it was clear that it is difficult to get insurance products for particular risks in those circumstances. Since that time and very recently the Government has made a decision on recommendation nine and further details will be available shortly.

**The Hon. ADAM SEARLE:** How shortly? Do we have any indication? Like in the budget?

**Mr BEAN:** Very shortly. Overnight I think—depending on how the systems go—some information will be available on the EPA website about the Government's response to recommendation nine.

**The Hon. ADAM SEARLE:** Well I guess we put a pin in that. We may come back to it subsequently. In relation to the evidence given about the Sharing and Enabling Environmental Data [SEED] Portal, is it the Government's position that the SEED Portal has all of the capabilities recommended by the Chief Scientist in her recommendation for a Whole-of-Environment Data Repository? Does it work the way the recommendations envisaged?

**Ms HAWYES:** I will take that one if that is okay.

**The Hon. ADAM SEARLE:** Of course.

**Ms HAWYES:** The SEED Portal works akin to a library navigation catalogue tool and there are about 2,500 data sets on there now. A repository is a more static home for data. This portal gives you that connectivity to a wider range of data sets. The ownership of the data sets remains with the people who collect the data but it links you to them. It also contains information about the quality of the data you are looking at. So you can navigate that and understand what you are working with. In that respect it is more like a portal than a repository if that makes sense?

**The Hon. ADAM SEARLE:** Sure. But do you regard it as fully built or is it sort of a work in progress?

**Ms HAWYES:** It is still being developed and over time it will have capacities that are coming through with new technology. It is able to be worked with over time more data sets going in and over time more intelligent sort of machine learning kind of techniques will be able to be applied to it. It has got that capability. We are still building it. We are still adding data sets. Last week we gave it an upgrade from the point of view of usability which is a project that has been in train for about six months and I think at the last hearing you raised some of the feedback about difficulties in terms of using it as a layperson which is legitimate and very accurate feedback and we are trying to address that. So it has just had a bit of an upgrade from a how user-friendly it is perspective. I would be happy to do a demonstration with the Committee at some point but it is continuing to be developed. It has many of the attributes that the Chief Scientist recommended but it is still a work in progress.

**The Hon. ADAM SEARLE:** So it has some of the attributes—not all—but it is a work in progress?

**Ms HAWYES:** Yes.

**Mr JUSTIN FIELD:** Just on that. You asked some questions last time Mr Searle about the Namoi Cumulative Risk Assessment Tool.

**The Hon. ADAM SEARLE:** I was about to come to that. That was the next question.

**Mr JUSTIN FIELD:** You can ask that if you like?



**The Hon. ADAM SEARLE:** No you can ask it.

**Mr JUSTIN FIELD:** The suggestion was that there is a tool that has already been created that can do some of this. It was designed specifically to look at how mines in the area and coal seam gas at the time might impact on water supplies in the Namoi catchment. There were a couple of reasons given in answers to questions on notice about why it had been superseded or it was not used or there were other tools available—I assume some of this is through the SEED Portal as well. The question is, is the SEED Portal and the tools that are available to you capable of reporting cumulative impacts and risks associated with existing and closed mines and potential coal seam gas in the region, which is what the Namoi Cumulative Risk Assessment Tool was designed to do?

**The Hon. ADAM SEARLE:** It was a special mapping tool. It was not just about information.

**Ms HAWYES:** I think in a nutshell it is best to consider it as a foundation piece for open data. Over time more and more data will be housed there but how it is used is a matter for others and in terms of monitoring, looking at those data sets and gleaning what you can about cumulative effects et cetera, that would be something that regulatory agencies could use that portal for over time.

**Mr JUSTIN FIELD:** I mean you are the regulatory agency. Are you using it for that?

**Ms HAWYES:** There are other mechanisms to capture licensed data. The portal itself can house a range of data and you can look at it for different purposes.

**The Hon. ADAM SEARLE:** Sure.

**Ms HAWYES:** It is a really important foundation piece for open data into the future and for citizen-based data too which is another aspect of the technology that will come online later this year where citizens can access it to contribute to the citizens science projects. It has got a broader capability than the Chief Scientist originally—.

**The Hon. ADAM SEARLE:** Just on that. The Chief Scientist recommendation for this repository or SEED Portal as you now have, that was separate and distinct to the cumulative impact tool that she recommended.

**Ms HAWYES:** Yes, that is right.

**The Hon. ADAM SEARLE:** Can the SEED Portal take citizen data on board or is that a capability to be developed?

**Ms HAWYES:** It can and we are working that up because there are protocols for the types of projects you put on there and the rigour around it and that is scheduled to come online later this year.

**The Hon. ADAM SEARLE:** And it holds data in different formats as envisaged?

**Ms HAWYES:** It can. The original recommendations were around different sorts of files, images, maps and it has all of that capability.

**The Hon. ADAM SEARLE:** What in your view is currently missing from the capability of the SEED Portal?

**Ms HAWYES:** The citizens science component is being developed to come online. There is always room for more data to go on there and over time to link up those data sets.

**The CHAIR:** You mentioned that there is a value placed on the quality of data that is in this portal. Who decides the quality value placed on it and are there parameters about how that is decided? Could you provide that detail?

**Ms HAWYES:** I can answer some of that here and provide more information on notice as to the actual rules. Each data set has a quality statement attached to it that tells whoever wants to use it what they are really working with and how confident they can be in those data sets. I can answer to that here and give you some more detail about the specific rules.

**The CHAIR:** Can you give us some examples of those value statements as to is it excellent, good, rubbish—.

**The Hon. TREVOR KHAN:** This comes from *Wikipedia*.

**Ms HAWYES:** It is not quite in those terms. There is a statement attached to each data set about what it is, where it is from, who owns it et cetera. It is probably easier to show the Committee at some point rather than try to explain it in that way.

**The Hon. ADAM SEARLE:** That would be useful. One of the criticisms of the SEED Portal as I understand it is that it does not contain data for example from proponents such as Santos for example. Is that something that the Government is going to attend to?

**Ms HAWYES:** It is and one of the things that I have recently done with it is we are recruiting for people to undertake that relationship management work and liaise on to build the data sets that are on there and the terms and conditions by which they are housed on there. We are recruiting at the moment for a project officer to do that work.

**The Hon. ADAM SEARLE:** I have two last questions on this topic. I am happy for you to take these on notice. Can you tell us how much the Government has spent on developing the capability of the SEED Portal to date and how much is envisaged being spent until the end point of having it as functional as you intend to have it functional?

**Ms HAWYES:** So there is a \$5.5 million capital investment and since that time there has been almost \$9.5 million in total in developing the system. What I can do is provide you with a breakdown of yearly projected costs?

**The Hon. ADAM SEARLE:** I am happy for you to give that on notice.

**Ms HAWYES:** On notice?

**The Hon. ADAM SEARLE:** That is fine. When do you think you will attend to including the proponent data?

**Ms HAWYES:** I cannot give a hard date at this hearing. It is an area that we want to work with different industries to bring the data sets into the system.

**The Hon. ADAM SEARLE:** I guess, given that there is one gas project currently in the pipeline, as it were, people would be interested in the data currently held by Santos. Is it envisaged that material be included in the SEED portal in the foreseeable future?

**Ms HAWES:** The SEED portal has the capability. How it ends up happening in the future is not something that I can speak to today. It has the capability to house it, but there are a whole lot of discussions and negotiations around what kind of data and what sort of products we could house on the portal, but it has the capability.

**The Hon. ADAM SEARLE:** Again, if you cannot answer that is fine, but is it envisaged that this data held by Santos in relation to its Narrabri project will be included on the portal in the foreseeable future?

**Ms HAWES:** I think it depends on what happens with the assessment of that project and a whole range of decisions being made in the planning system. Within our portfolio we are working with the EPA on linking public register, public licensee information to the portal and that is an obvious step in the direction that you are talking about.

**The Hon. ADAM SEARLE:** Last question on this topic; is it envisaged that a decision would be made to house Santos data about Narrabri on the portal before the assessment of the proposal by the Information and Privacy Commission [IPC] is conducted?

**Ms HAWES:** No. At the moment that is outside my remit but the portal is there and has the capability to house any kind of data we would like.

**The Hon. ADAM SEARLE:** To make sure I have understood, I am happy for that question to go on notice to whoever in the department should answer that question about whether there is any intention to house the Santos data accessible to the community through the portal.

**Ms HAWES:** There is a range of planning processes and areas where information is made public. It does not happen to be on the data portal that I operate within my portfolio, but it does not mean it might not be appropriate, it depends on a whole range of things.

**The Hon. ADAM SEARLE:** In terms of recommendation 11, the risk management and prediction tool, the recommendation was that the Government should develop its own bespoke tool for cumulative assessments. The response, as I understand it from you Mr Wright previously, was there is a range of such tools that the Government uses, including within information housed on the SEED portal. At page 16 of the transcript Ms Mackey said the SEED portal contains datasets that have such tools in it. The only tool that has been identified as far as I am aware is the risk management licensing scheme operated by the EPA. Can you name and point to any such tool, including spatial mapping capability, as recommended by the Chief Scientist that is currently being used by Government?

**Mr WRIGHT:** I think in the evidence I gave at the last hearing I talked about from the division of resource and geoscience perspective the various risk based exploration codes of practice that have been developed, which include the Coal Seam Gas Well Integrity code and the Fracture Stimulation codes, which are risk-based codes which provide some certainty to the industry in how to go about doing their work to deal with risks.

**The Hon. ADAM SEARLE:** Just to make sure we are not speaking at cross purposes here, there was the question about the Namoi catchment tool. I think you have given some answers on notice which say, well that might have been useful but it has been overtaken by new datasets. Leaving the issue of the data that goes in, as I understood the description of the Namoi catchment tool it was a spatial mapping tool, you put all the data in it and you can essentially run scenarios which will tell you the impacts or likely impacts of certain proposals. Things like risk-based licensing schemes and the sort of mechanisms that you have been talking about seem to me to generate information but do not apply it in any kind of simulated way. It seems to me—again, I am not an expert here—recommendation 11 made by the Chief Scientist has not been implemented and is not in use anywhere in Government in terms of assessing either extractive industries proposals generally but proposed to assess coal seam gas in particular. Is that a correct understanding that I have?

**Mr WRIGHT:** The Government's response to the Chief Scientist and Engineer's recommendation around development of a centralised risk management prediction tool was that it was going to investigate risk-based approaches, plural, and tools to assist with assessing proposals. Having done that has determined those existing tools, which are used across Government, suffice for dealing with responding to the recommendation of the Chief Scientist and Engineer.

**The Hon. ADAM SEARLE:** I understand what you are saying, but it sounds very much to me like the Government has said; the recommendation is to develop a new tool, we are not going to develop a new tool because we think the tools we have now are adequate. That is a fair assessment?

**Mr WRIGHT:** The Government is certainly of the view that the existing tools were sufficient and that an additional tool was not required, as I think I recounted at the last hearing.

**The Hon. ADAM SEARLE:** That says to me that the Government has not implemented the Chief Scientist's recommendation 11 and does not have any intention of doing so.

**Mr WRIGHT:** I just go back to the Government's response to the Chief Scientist's recommendation, which is set out in the Gas Plan, which was that it would investigate tools and approaches to risk management.

**The Hon. ADAM SEARLE:** I appreciate your position, Mr Wright, and I am not being critical of you or anybody in this room. I guess what we are trying to come to terms with is you are talking about the way in which you have characterised the Government's position, but I have to tell you, having observed this space fairly closely for over five years now, various Ministers in this Government have said: We will implement the Chief Scientist's recommendations.

**The Hon. TREVOR KHAN:** You are not really here to give evidence. I think the invitation was to Mr Ruming to make some comment on it. It is not time for speeches, Adam, you have plenty of time to make them later.

**Ms ABIGAIL BOYD:** Could I clarify the reference to existing tools. Existing as at the time the Chief Scientist wrote the report?

**Mr WRIGHT:** As at the time of the Government's response to the Chief Scientist's report.

**Ms ABIGAIL BOYD:** Do you know if they were around at the time of the Chief Scientist's report?

**Mr WRIGHT:** I would imagine some of those tools were around at the time of the Chief Scientist's report.

**Ms ABIGAIL BOYD:** Presumably the Chief Scientist had the benefit of knowing what those existing systems were?

**Mr WRIGHT:** I cannot speak on behalf of the Chief Scientist, I am sorry.

**The Hon. ADAM SEARLE:** It is a reasonable inference that the Chief Scientist would not have recommended a course of action in terms of developing a new risk management tool if she thought the existing tools were adequate for the task.

**The Hon. WES FANG:** It is also a reasonable inference that, as Mr Wright said, he cannot answer for the Chief Scientist.

**Mr WRIGHT:** I think Mr Ruming was going to add to the response.

**Mr RUMING:** With the Namoi Catchment Risk Assessment Tool [NCRAT] that was developed back in about 2010, it had outputs from a water model that was developed as part of the original Namoi Catchment Management Authority at the time, set that up. Subsequent to that with the bioregional assessment work that was done by the CSIRO, they have essentially had a look at the region again and what the impacts could be on coalmining development scenarios with the gas wells on a regional scale. Those results of those assessments are now available and they used update datasets. The water model that was used for the bioregional assessment was one they developed for that because the old one they said was not as good, it was not really fit for purpose for what they wanted to do, we have got better software.

**Ms ABIGAIL BOYD:** The one that was developed in 2010?

**Mr RUMING:** Yes. That water model was not used by the bioregional assessment. They actually developed a new water model.

**Ms ABIGAIL BOYD:** What year did they develop it?

**Mr RUMING:** I think it was in—I would have to take it on notice. I think it was in 2016-17. It was part of the bioregional assessment work once they got going. With the assessments themselves, they had in the order of about 100 people working on it, the project, a lot of money. So then they were able to assess the potential cumulative impacts, groundwater, groundwater dependant ecosystems and things like that with updated tools, updated models and all those results now available on the hour.

**Ms ABIGAIL BOYD:** Is it fair to say that the Government has not established a centralised risk management and prediction tool?

**Mr RUMING:** I think with the tools that are available, as the response was before, that tapping into all the existing ones and things other people have developed provides a—

**Ms ABIGAIL BOYD:** It is not a centralised risk management and prediction tool, which is what the recommendation called for.

**Mr RUMING:** And in a way if you think about it, the idea of a centralised tool, the Government now has what you might consider more like a toolbox, and with the internet and the ability to access different tools and bring them together, much like you see with a portal, where you have got the one portal bringing together multiple datasets. You have also got the various risk management tools, like the bioregional assessment, things like that, that can be accessed separately, so then you can pull together future emissions work, you can access that, you can access, say, noise and dust work and essentially consider it more like a toolbox as opposed to a centralised—

**The Hon. ADAM SEARLE:** Without getting caught up in terminology, I ask this question: Given the various mechanisms and tools that you have available, is there the capability of putting all these datasets together and running, if you like, a simulation to work out the likely impact of a proposal for an extractive industry on a given landmass, including water as well as land, the likely outcomes?

**Mr RUMING:** If you think about the Narrabri Gas Project, all the requirements around SEED actually request that. It talks about what all the impacts are for your project. What are the fugitive emission impacts, the potential water impacts—noise, dust, the whole lot. That is being addressed as part of the environmental impact statement [EIS], which is still under assessment, so it all comes together in that sense. The NCRAT tool was more a regional look, including, say, a potential coal mine development. The bioregional work did the same where, as well as considering the Narrabri Gas Project, also had consideration of the potential coal mining development. So

it was in a regional sense and the community impacts, whereas on the site-specific ones the EIS's request issues around impacts on water, noise, dust and all those things for that particular site.

**Mr JUSTIN FIELD:** Mr Wright, could I take this in a slightly different direction and ask something contemporary: What is your understanding of the obligation of the New South Wales Government as part of the energy bilateral that has been signed between the New South Wales and Commonwealth governments?

**Mr WRIGHT:** I might pass that to Ms Hawyes.

**Ms HAWYES:** The bilateral that was announced is largely governing investment in energy efficiency and emissions production over the coming years.

**Mr JUSTIN FIELD:** I am sure it would not be lost on you that there was a pretty significant commitment under the agreement in regards to gas. I guess given that we are talking about coal seam gas, what is your understanding of the gas commitment that has been made by the New South Wales Government as part of that?

**Ms HAWYES:** It is certainly not lost of me and there is a target in there for gas as part of that diversified strategy—

**Mr JUSTIN FIELD:** Seventy petajoules, is that right?

**The Hon. TREVOR KHAN:** Let her finish.

**Ms HAWYES:** Correct. The memorandum of understanding [MOU] itself will probably be made publicly available in the next couple of days so you can interrogate that for yourselves. Yes, there is a target in there about gas and the Premier's press release went through that and talked about the different options to achieve that as part of a diversified energy security strategy. But the focus of the MOU is on funding for investment in renewables.

**The Hon. ADAM SEARLE:** Can I just ask, if each of those avenues does not produce the 70 petajoules, what consequences are there for the State of New South Wales under that agreement? Does the State stand to lose some of the benefits of that agreement if the State does not produce the extra 70 petajoules?

**Ms HAWYES:** As the media reports and the press release state, there are different options available and, if they are unable to be realised for whatever reason, that will be a matter for government to determine what the next steps are.

**Mr JUSTIN FIELD:** There are obviously a few options here. It has been canvassed in the media—I recognise that. Newcastle, the Illawarra and the Narrabri Gas Project have been flagged. How are priorities chosen inside the department in terms of pursuing one or the other to try to reach that target in the date specified?

**Ms HAWYES:** That is a matter for the consideration of the Government across departments, not simply within the department that I am in. The MOU is agnostic about how you achieve that. It is just a commitment and a target that that is what is considered necessary to make sure we have firm energy supply while we transition to renewables.

**Mr JUSTIN FIELD:** What is the current expectation of Santos in the Narrabri Gas Project as has been proposed to the planning department in terms of petajoules of gas that it can deliver?

**Ms HAWYES:** It is not my area of direct responsibility but my understanding is that it is 70 petajoules.

**Mr JUSTIN FIELD:** Okay, thank you.

**Ms ABIGAIL BOYD:** Can I take us to recommendation 12 and some of the answers that were provided on notice? In answer 26 the EPA listed the members of the gas working group—thank you for that. Are any of the members of the gas working group or the representatives there scientific experts or are they all bureaucrats?

**The Hon. TREVOR KHAN:** You can be both.

**Ms ABIGAIL BOYD:** You can be both—I am happy for an and/or.

**Mr COWAN:** Those are government agencies but we do have a number of experts within government, as mentioned, whom we can call upon to sit on that group or provide advice.

**Ms ABIGAIL BOYD:** In response to question 28, which was a question about how the latest scientific evidence is fed into the group, the answer in 28 tells us who looks for that information and what meetings of the various groups are held. But it does not really tell us how that new information gets included in the common understanding—is it through the regular peer-to-peer interaction between scientists from other States and countries? How do scientists incorporate their new findings to find their way into the direction on CSG policy?

**Mr COWAN:** One of the mechanisms that the EPA uses is, as we have mentioned here, we have a scientific research officer who is scanning across different jurisdictions and tapping into each jurisdiction's processes and looking for any releases across media or where there are international standards that change to see if there is anything that New South Wales can learn from that or if there are any implications for the way New South Wales regulates the industry.

**Ms ABIGAIL BOYD:** If there is, how do they then bring that to the attention of others who are involved?

**Mr COWAN:** For those mechanisms that are mentioned through the gas working group, we would raise an item there on the working group that would be discussed with a group. Informally, we have a very good working relationship with our colleagues in other agencies and we would bring it to the attention of the relevant person.

**Ms ABIGAIL BOYD:** Can you recall instances where that has occurred—where new scientific information has come through and changed the ways that people are doing things?

**Ms DWYER:** Another way that that information is fed back is, as any of the agencies become aware of changing scientific thoughts, that evidence is analysed and fed into any questions or comments through the planning process. That is the main mechanism. There has not been a significant policy change around coal seam gas so the piece where that scientific evidence is important is in assessing any developments that come before government. That advice then gets thread into the planning processes—

**Ms ABIGAIL BOYD:** When you say that that new information will get put into the planning processes, how does that happen?

**Ms DWYER:** It is a two-way process. Because it is a cross-government working group, all of the agencies are represented and have access to the conversations that are happening around particular advice. For the EPA in particular, if there was scientific evidence that was changing or being questioned, then we would be able to do that analysis or have analysis undertaken on that. Then, if we had questions or concerns through one of the planning applications that had come through, we would ask those questions of either the proponent or the relevant scientist to ask, "What information do we need to make an informed recommendation?"

**Mr ISAACS:** I can perhaps give some examples in the water management space as to how it relates to projects, and I will talk about other types of projects as well, not just coal seam gas because there are more types of other projects than there are gas projects in New South Wales. We have a team of groundwater experts—hydrogeologists—who are experienced both with government assessment and planning and academia and industry. They all attend and monitor conferences and journalists and keep their knowledge up-to-date and apply that to assessments and projects, whether it be gas or other projects. With the development of projects, some of the requirements, particularly in newer projects around the State there are a lot of adaptive components to that. Most major projects now that have interaction with groundwater are required to review and update their groundwater model every three years or thereabouts, depending on the project.

That means that as they are reviewing and updating their model, it can incorporate new technology and new advances. The water management plans and other plans that are associated with it are designed to be an adaptive thing that can be updated and draw on new technology. Even once a project is approved, there are mechanisms through those plans and updates to models to bring in new and updated scientific knowledge and understanding.

**Ms ABIGAIL BOYD:** When those models are updated, and I guess this comes back to what we were talking about before with the groundwater on those old wells, how much monitoring is done of compliance with those sorts of plans and how much is relying on the operator of the gas company itself to make sure it complies with the code or the water plan?

**Mr ISAACS:** I know the EPA will be able to talk a lot more and I am talking in generic terms across major projects but there are requirements under development consents for annual reviews where say the company is required to sign that it is compliant or not compliant. But then it is also required to publish independent audits

of conditions and they do that in consultation with all relevant agencies. So those are the mechanisms under a development consent. Then the regulators such as the EPA I am sure will be able to talk about the work that they do separate to the proponent to monitor that.

**Mr JUSTIN FIELD:** If I could follow on from the last line of questioning. Has the Government done any independent analysis or done any analysis themselves modelling on how much the 70 petajoules of gas delivered—either coming from Narrabri or being imported—how much that would reduce electricity or gas prices in New South Wales?

**Ms HAWYES:** I will need to take that on notice in terms of any specific work. As I said before the memorandum of understanding [MOU] itself is a really broad instrument to invest in a range of new technologies and emissions reduction initiatives. I understand the press coverage in terms of the gas component but it is a much broader instrument than that.

**Mr JUSTIN FIELD:** I certainly understand that. The suggestion came not so much from the Premier and the New South Wales energy Minister, more from the Prime Minister that this would reduce energy prices and I was just wondering what that was based on. I assume given that it was New South Wales delivering into the east coast gas market that work had to come from assumptions made in New South Wales. So is there any analysis that has been done by the department or where was that figure arrived at?

**Ms HAWYES:** Can I take that on notice?

**Mr JUSTIN FIELD:** That would be great. Thank you. Back down into the weeds. You may not have heard but there were some questions asked of the community groups that were here and also of Santos this morning about the way that the Community Consultative Committee [CCC] for the Narrabri Gas Project was operating. There seems to be some friction there between People for the Plains and Santos. One of the areas of concern seemed to be around no longer having an independent Secretariat for the CCC. It is Santos that is operating as the Secretariat and I think the chair has changed as well recently. I was just wondering why the Government no longer provides the Secretariat for the CCC? It may not have been the EPA before. I think it might have been resources and geoscience who provided it before.

**Ms DWYER:** I am happy to take it on notice as to why it has changed but my understanding is that the committee actually was made an offer and accepted that Santos be the Secretariat.

**Mr JUSTIN FIELD:** Right.

**Ms DWYER:** That is my understanding of how that decision was made by the committee.

**Mr JUSTIN FIELD:** Is there anyone on the panel that has understanding of how the CCCs historically operated or how it has changed?

**Mr ISAACS:** I was there at the time but I do not recall the specifics around that. I remember the Secretariat changing but I do not remember the reasons for it as Ms Dwyer has outlined. Perhaps I can take that on notice.

**Mr JUSTIN FIELD:** That would be great. Perhaps if you could just give the Committee an idea about the role that the Government plays in CCCs. Often they are set up and are not necessarily directed by Government but we seem to fit in as part of the end of the planning process to ensure there is communication between the community and the proponents. So what is the current role of the Government with regards to the CCC from the Narrabri Gas Project?

**Mr ISAACS:** I think with the Narrabri CCC it is probably a little bit different from a lot of the other CCCs because it is not part of an approved project. So it is still in the exploration phase. There was a group in Gloucester as well with the AGL project.

**Mr JUSTIN FIELD:** But the NSW Land and Water Commissioner was previously chairing it until he got sacked from that role. Is it a Government person that is currently chairing it?

**Mr ISAACS:** I do not have current information.

**Mr WRIGHT:** I think we will have to take that on notice. I am not sure of the answer to that question.

**Mr JUSTIN FIELD:** That is part of the friction that is coming about.

**Mr BEAN:** I can tell you that the EPA is a keen participant in the process and we have attended 29 of 30 meetings.

**Mr JUSTIN FIELD:** Is EPA a member of the CCC?

**Mr BEAN:** We attend in order to provide information to the community and so on.

**Mr JUSTIN FIELD:** When was the last meeting that the EPA attended?

**The Hon. TREVOR KHAN:** Well they have attended 29 out of 30 so—.

**Mr JUSTIN FIELD:** Sorry I missed that. That is 29 out of 30. Okay.

**Ms DWYER:** It was only the last one that we did not attend.

**Mr JUSTIN FIELD:** So the one without the NSW Land and Water Commissioner?

**Mr COWAN:** We were responding to bushfire incidents at the time.

**Mr JUSTIN FIELD:** Okay. I was not suggesting—. It is okay. That is useful. Thank you.

**Ms ABIGAIL BOYD:** Can I just ask some questions about the security deposits. I am looking at an answer to a question on notice answer No. 21. It was confirmed that these security deposits remain current. There was some suggestion in the questioning that perhaps they expire after a period of time. So it was confirmed they were current but then it said they are bonds in the form of a deed or paid in full in cash. We heard from Santos earlier that they have not paid any in full in cash. So presumably all of this are in the form of a bank guarantee?

**Mr WRIGHT:** Correct.

**Ms ABIGAIL BOYD:** Can you give more details on the nature of that bank guarantee and whether it is unconditional in all respects or whether it is a first ranking—.

**The Hon. TREVOR KHAN:** It would have to be conditional otherwise if you have a bank guarantee without conditions you are—.

**Ms ABIGAIL BOYD:** I am very curious about what those conditions are and I ask you this because I have seen a number of quite interesting security bonds that have been given up by mining companies. For example one that was a bank guarantee that was contingent upon the approval of the Indian Government being given. Who knows whether it was ever given? Some others I have seen have exceptions that basically provide prior or first ranking security on the assets of the company. But then so do its parent company, its sister companies and a whole bunch of others so the value of that guarantee is really dependent on the circumstances. Do you have any more details around the kind of guarantee that that is and also whether anybody has paid in actual cash and what percentage of the current security deposits for the gas companies is cash?

**Mr KEON:** I can probably assist with that from the Mining Act side of things because it is harmonised legislation. In terms of the bank guarantees they are not conditional in the sense that somebody else has first priority over the Government. The Government has priority on those. They have to come from a specified banking institution so it is not just any bank from any country. It certainly has to be recognised and on an approved schedule. They are not time-limited in any other way so we can always have funds at any point should Government need to step in and rehabilitate. So in terms of actual cash versus bank guarantees that is something that we could take on notice and come back to you.

**Ms ABIGAIL BOYD:** That would be useful.

**Mr KEON:** Just to specify. Is that for all rehabilitation or just in relation to petroleum?

**Ms ABIGAIL BOYD:** Just in relation to petroleum. In answer 22 we talk about the sum of rehabilitation bonds held on behalf of AGL and Santos. That Santos figure we heard from Santos earlier is all bank guarantees and not cash. In answer 21 you talk about that some of it is also in cash so it would be useful to know if that is the AGL component or how much of that is actually—.

**Mr KEON:** Let me take that on notice.

**Ms ABIGAIL BOYD:** Thank you.

**Mr JUSTIN FIELD:** I had a question about the MOU potentially for the EPA. During the last hearing I asked some questions about it and asked them to come back with some answers on notice. But there were a



couple of elements that were not answered. One was in regards to the review of the MOU. I understand that it was established in 2016. It was to be reviewed by all the parties within two years. When was it last reviewed?

**Mr COWAN:** It is currently up for review.

**Mr JUSTIN FIELD:** Yes well it would be if it was due to be reviewed in 2018. It has not been reviewed I take it.

**Mr COWAN:** Yes. With the recent Machinery of Government changes the relevant agencies are now within the NSW Department of Planning, Industry and Environment [DPIE] cluster. Now is a good opportunity to finalise that current review.

**Mr JUSTIN FIELD:** It is. So it is currently being reviewed. Is that the case?

**Mr COWAN:** Yes.

**Mr JUSTIN FIELD:** Yes. Okay. Who is leading that review process? Is it the EPA?

**Mr COWAN:** It is certainly a topic on the gas working group agenda.

**Mr JUSTIN FIELD:** So it is currently being reviewed or you have not yet decided who is undertaking the review.

**Mr COWAN:** It is being discussed.

**Mr JUSTIN FIELD:** It is currently being discussed how to undertake the review. Okay. Any idea about when that review might be finalised?

**Mr COWAN:** I could not give a date on that.

**Mr JUSTIN FIELD:** So it has not been reviewed and you have not yet decided how to undertake the review of it, but at some stage it will be reviewed?

**Mr COWAN:** Yes.

**Mr JUSTIN FIELD:** I had another question in relation to an answer to a question on notice, and it did relate to the expert standing advisory body. We have been through it a bit and I do not want to get into the details; I think there is a dispute between the Committee and the Government about the expert scientific committee and the expert standing advisory body and the different roles and functions and how that works. One of the questions related to how the independent expert scientific committee [IESC] was advised that the New South Wales Government was essentially going to use it as its standing advisory body option. I asked a question about when it was informed—if, indeed, it was informed—and the answer that came back stated:

Based on searches conducted in the time available, the Department of Planning, Industry and Environment is unable to confirm if the IESC was consulted before this decision or how the IESC was advised of the decision.

I would have assumed you could just ask them if you were using this body as the advisory body for CSG in New South Wales. I want a little bit more information about whether you need more time to find out how the consultation happened or how that request was made.

**Mr WRIGHT:** I think in the response we indicated that given the time frame to respond to that question on notice—

**Mr JUSTIN FIELD:** That is what I am asking.

**Mr WRIGHT:** We undertook some internal searches and we were not able to discover any information that indicated if and when that particular body had been advised. If the Committee was to give us some more time, we could make some further inquiries.

**Mr JUSTIN FIELD:** I would appreciate it if you could. It led me to have another question in my mind: Who is the main point of contact between the New South Wales Government and the independent expert scientific committee? I understand there are relationships with planning processes, but obviously this is with regards to its role as an advisory body of sorts. Who is the person or the group within the New South Wales Government that deals with the IESC?

**Mr WRIGHT:** My understanding is the connection is primarily with the planning and assessment division of the department.

**Mr JUSTIN FIELD:** This does go to that whole point that this is not being used in its role as a standing advisory body, as envisaged in the Chief Scientist's recommendations. That is its role in providing input into the planning process, which is quite distinct. But that is really the only relationship that the New South Wales Government has with the IESC—is that the case?

**Mr ISAACS:** I might just clarify that the independent expert scientific committee undertakes—or certainly has in the past undertaken—a number of different types of work and bodies of work. They have had different relationships with different parts of the New South Wales Government for those different pieces of work. So, for example, the bioregional assessment program—they were working very closely with, for example, the water people in government, as well as the EPA and a number of other groups. So they do work very closely depending on the different type of work, so they are not just there for the assessment component.

**Mr JUSTIN FIELD:** Fair enough. I am happy if you could, Mr Wright, take it on notice. If the Government made a deliberate decision to rely on them to fulfil that role, I am assuming they were advised. If you do happen across it in the next few days, before we come to report it, I would appreciate you taking that on notice.

**Mr WRIGHT:** Can I ask what the time frame is?

**The CHAIR:** Five days.

**Ms ABIGAIL BOYD:** The report states that the EPA is the lead regulator for human health impacts of CSG. Is that still the case?

**Ms DWYER:** Which report?

**Ms ABIGAIL BOYD:** The Chief Scientist's report, on page 5, notes that the EPA is the lead regulator for human health impacts of CSG.

**Mr COWAN:** I note that the EPA's role as the regulator is for the compliance and enforcement of all conditions except for work health and safety, which remains the responsibility of the Resources Regulator. That is very much around once those conditions are issued, the EPA is responsible for doing the compliance and enforcement work against those.

**Ms ABIGAIL BOYD:** Is there any data publicly available in relation to that compliance?

**Mr COWAN:** Any of the compliance actions that would be taken would be listed on the EPA's public register for any gas licensee.

**Ms ABIGAIL BOYD:** Are you aware of any reports being made regarding negative human health impacts to the EPA?

**Ms DWYER:** Not off the top of my head, but we could take it on notice.

**Ms ABIGAIL BOYD:** That would be really good, and also what were the outcomes of those investigations. That would be very useful.

**The Hon. TREVOR KHAN:** Could I propose, if there is nothing further—I think it is probably better coming from me than from others—because there is something important happening at 4.30 p.m., that we consider pulling up stakes?

**The CHAIR:** If there are no further questions, we will dismiss the witnesses. Thank you for attending this hearing. The Committee has resolved that answers to questions taken on notice be returned within five days. The secretariat will contact you about questions that you have taken on notice. Thank you for your attendance today.

**(The witnesses withdrew.)**

**(The Committee adjourned at 16:20.)**