

REPORT ON PROCEEDINGS BEFORE

STANDING COMMITTEE ON STATE DEVELOPMENT

BENEFICIAL AND PRODUCTIVE POST-MINING LAND USE

CORRECTED

At Macquarie Room, Parliament House, Sydney on Monday 5 August 2024

The Committee met at 10:00 am

PRESENT

The Hon. Emily Suvaal (Chair)
Ms Abigail Boyd
The Hon. Mark Buttigieg
The Hon. Wes Fang (Deputy Chair)
The Hon. Scott Farlow
Ms Sue Higginson
The Hon. Peter Primrose

* Please note:

[inaudible] is used when audio words cannot be deciphered.

[audio malfunction] is used when words are lost due to a technical malfunction.

[disorder] is used when members or witnesses speak over one another.

The CHAIR: Welcome to the first hearing of the Committee's inquiry into beneficial and productive post-mining land use. I acknowledge the Gadigal people of the Eora nation, the traditional custodians of the lands on which we are meeting today. I pay my respects to their Elders, past and present, and celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of New South Wales. I also acknowledge and pay my respect to any Aboriginal and Torres Strait Islander people who are joining us today, here in the room or online.

I ask everyone in the room to please turn their mobile phones to silent. Parliamentary privilege applies to witnesses with regard to the evidence they give today. However, it does not apply to what witnesses say outside of the hearing. I therefore urge witnesses to be careful about remarks they may make to the media or to others after completing their evidence. In addition, the Legislative Council has adopted rules to provide procedural fairness for inquiry participants. I encourage Committee members and witnesses to be mindful of these procedures.

Mr JACK AYOUB, Branch Organiser, Australian Workers' Union, sworn and examined

The CHAIR: Welcome, and thank you for making the time to give evidence today. Would you like to start by making an opening statement?

JACK AYOUB: Thank you, Chair—a brief opening statement. I appear today in support of the Mining and Energy Union's submission. We are in alliance with them and the New South Wales mines alliance, as I'm sure you're aware, and work very closely with them. The question that we believe this Committee is dealing with is what will be the legacy of mining. What will its legacy be in the State of New South Wales? As part of that, there are a couple of elements.

The first that we would put is that the people of New South Wales own these resources. Of course, they are extracted and sent overseas for profit, by and large, but the people of New South Wales fundamentally own the resources. Those mining communities have some expectations about what post-mining land looks like and how that process is engaged, principally underpinned by the fact that if people have good, secure jobs—which they do have as a result of the mining industry—we keep families and communities strong. But when mines wind down, they want to be involved in the process. We think there's a way to do that.

We also think that we ought to be looking at maximising the benefit of post-mining land use, and that may have a number of indicators, which we can discuss. The final contention that we put in support of the Mining and Energy Union's submission is that the current regulatory framework is not robust enough and not flexible enough to meet the expectations of the community. If we want to see ourselves building social licence into the future, then we ought to have a better regulatory system, and there are examples of ways we can do that. I think that broadly summarises the points that I want to put today.

Ms ABIGAIL BOYD: Good morning, Mr Ayoub. One of the things that comes out strongly in the MEU's submission is in relation to the need to understand where industries are going in order to re-skill appropriately. Could you inform the Committee about the types of skills that workers who are working on coalmine sites currently have, and especially this idea that a lot of those skills are company certified? What do you think is required in order to move towards workers who are skilled up for new industries?

JACK AYOUB: I think that it would be impossible for me to summarise, basically, the skills that people acquire in mines—not only in coalmines but in metalliferous mines and other forms of extraction. As you rightly put, many of those are on-the-job skills. They're learnt on the job, but they're still very significant in terms of their expertise and their quality. They're not transferable in the sense that they're not recognised by the current frameworks we have. I think what we've got to do is figure out a way that those skills recognised in the workplace, where they can be utilised in other environments, are transferable in a formal sense. I think there is a real concern in mining communities that, as we move away from coal—and we know that, certainly domestically, the demand will diminish in the near future and internationally over a longer term—we need to give people some sense that they can transfer into other workplaces. I can't summarise them, but they are many and varied and they are highly specialised. I think they are redeployable if we have the right regulatory system in place.

Ms ABIGAIL BOYD: So would a good first step be a skills audit? Somebody who comes along—we would have liked authorities to be in place already, but if there was some sort of a future jobs authority in place that could do that audit and actually work out what the skills are and which ones need to perhaps be given a formal qualification through TAFE or something else. Is some sort of skills audit or accreditation what we're looking for?

JACK AYOUB: I think so, yes. That's not only of benefit to the broader economy because we redeploy workers, but it also provides certainty for them that there is a formalised process—whether it's an assessment to say these skills can be transferable, or another good example is that we don't really have, and probably should have, a renewable energy apprenticeship. I've been to many sites where we've got people "rewiring the nation", to use that term, and we don't have apprenticeships that deal with the specific skills that those people need. I think you're right that we need some formal authority that assesses and transitions these workers into other industries.

Ms ABIGAIL BOYD: I guess that it's a two-way process, then. Your submission talks about if we knew what the industries of the future were, we would be able to plan our training better. Also, from an industry perspective and from the Government's perspective, knowing what the skills are already would help feed into what sort of industries would be viable in the future as well.

JACK AYOUB: I think that's right. We have latent capacities, as it were, that are not entirely defined. If we can define them and say that within the Government projection of 12,000 jobs lost, 1,000 of those people have this particular skill which is redeployable here, perhaps that suddenly makes that industry viable because we had latent expertise. We can't simply say, "Oh, well, we don't know what the future will look like; therefore we

can't move." Let's figure out what we've got now, and that may prove ground for us to move and may prove ground for private industry to move too.

Ms ABIGAIL BOYD: In a similar respect we often talk about ensuring that these coal communities that have kept the lights on for decades are not only acknowledged but shepherded as well through the transition, in terms of community infrastructure—ensuring that the post office, the local corner shop and all the rest of it doesn't go out of business while we're doing this sort of transition. Would we also need some sort of community infrastructure audit to see what would be at risk as we are transitioning?

JACK AYOUB: It's one approach. As part of the submission, the Idemitsu example is very good. I know the Chair would be well across the detail of that. If we, in great union tradition, bring everyone to the table and say, "How best do we do this?", if we have industry there, we have the community represented and we have councils represented as well as the unions, we're then in a position to say, "Okay, what's the maximum benefit? What is this community in need of?" It may be the case that the best option is to return it to regenerated habitat. That might be the best option, but it's not in all cases. Can we do that and do something else that provides an amenity to the community?

There are examples in Western Australia, of course, where open-cut coalmines are turned into lakes for recreational use. I think that's an overall benefit to the community. I think the critical piece is that we've got to bring everyone to the table. We have broad agreement on this. The Idemitsu example is going to bring \$1 billion worth of economic activity. That's good for everyone. We've just got to break away from this stigma that the operator has taken their resources and sold them overseas, they've put into some bond scheme that is insufficient that we set up in 2021 and they go away and the community is left. I think the extension of that is that we cannot say with any intellectual legitimacy to these communities that they are included in the transition away from coal, and that's the critical piece. We can have them at the table—I think they want to be there—but we've got to build the table and invite them.

Ms ABIGAIL BOYD: That lends itself, then, to a bottom-up structure. We're looking at each community coming together to work out what's going to suit them and what the best needs of that community are, supported by these sorts of government transition authorities.

JACK AYOUB: I think so. There's a beautiful phrase in here, which I won't be able to find, but we should be prioritising the community's ideas about how they want to reuse these mines, not the regulators, because it's easy for the regulator to say, "We'll replace the strata of the soil, plant some trees and see you later." That's not the best use. I'm not saying they all have to be industrialised, but communities will have innovative solutions as to how we do this. It's got to be a bottom-up approach supported by a top-down regulatory structure.

The CHAIR: Mr Ayoub, how does the Australian Workers' Union view the potential that exists for beneficial and productive mining land use?

JACK AYOUB: There's enormous potential—enormous potential. The Idemitsu example I won't labour, but it's gold standard. Of particular focus for us into the future, in 50 years' time—we know in the next decade we're going to get a lot of metalliferous mining happening right across New South Wales. It's going to be exponential. Communities like Cobar already are thinking about what they do when those mines reach the end of their life. We're in a really good position to partner with them and say, "Here are all the possible potentials for use into the future", but at the cutting edge of that are coal communities and the opportunities are endless, really.

The CHAIR: What role does your union play in advocating for the interests of workers in post-mining land use planning?

JACK AYOUB: We don't really have a seat at the table. Of course, things like this are helpful but there is no real formal process for us. Once the mine's shut down, our direct interest—the workforce in that place—has moved on. So we don't have a direct and legitimate—to use that word—seat to say, "Okay, this is what we think, as a representative of the community and its workers, ought to be done into the future." It's very hard for us to do that at the moment.

The Hon. MARK BUTTIGIEG: Is that a function of—presumably the union had lobbied previous governments to that effect—just putting the shutters up, or is it a case of there hasn't really been a formal structure that's been sought by the union or the government? Why is that? I mean, it's a sort of thing that you assume would naturally occur to people to whip into shape and put together.

JACK AYOUB: You would think so. I don't know the historical representations that have been made by us or the Mining and Energy Union so I can't speak to that, but perhaps there was an approach by the previous Government that, "We'll leave it in the hands of the regulator and we don't need to engage in a consultative process." I imagine that's probably what happened.

The CHAIR: Mr Ayoub, given the opportunity that you obviously have here on behalf of the workforce that you represent, when you're visiting sites and hearing from workers directly that work in these industries, what is it that they say they want? What are their concerns?

JACK AYOUB: It's a very perspicacious question, even though it's a simple one, because what I have to constantly confront in my conversations with people in the workplace is a sense that they're left out, particularly when it comes to energy production. We look after a lot of people who do overhead powerlines. They're getting a wonderful benefit in rewiring the nation, but if you talk with people in the coalmining space, the metalliferous mining space, whether they're directly impacted or not, they have a sense that they're not part of the energy transition. Their principal concern is "Am I going to have a job in the future? What's the impact of that on my family? How does that impact my community?" Certainly across western New South Wales, again to use Cobar as an example, the mining in that area keeps it alive. The mining activity in the Hunter keeps the Hunter alive.

There's a lot of good wine there, but there's also a lot else going on. They're nervous. We've got to be innovative. I know there are good examples in Germany of bringing people with us and saying, "Look the energy transition has got to happen. We're moving down that road. But here is your pathway through it. Here is how it affects your community and your family. This is what it will mean in real terms." The first step in that is saying, "Come to the table. Tell us what you need. How do we do this in a way that supports you and your family and your community?"

The Hon. MARK BUTTIGIEG: You mentioned the German exemplar. Can you outline a few of those things that were done over there? I hear this thrown up all the time. It does seem as though they got it right to a certain extent. Can you elaborate for the Committee?

JACK AYOUB: One of the central features of the German system, particularly as it relates to coal, was the creation of a fund that allowed for pensions in the transition process. They guaranteed the income of coal workers moving out of coal and transitioning into other employment. Maybe that's a model we want to look at. I don't know. But that was the central feature to say, "Look, we've have to make this transition, but you and your family are going to be looked after through the process." Those kinds of things that touch on the psychological moral foundations for people will make it easier for everyone.

The Hon. MARK BUTTIGIEG: Are you aware of the economics behind that fund? Was it Government funded or did industry have to contribute?

JACK AYOUB: I'm not, no. I don't know the detail.

The Hon. MARK BUTTIGIEG: Basically, "Here is your income security. We will try and get you another job if you're interested. If you're not, you are going to be looked after financially."

JACK AYOUB: Correct.

The CHAIR: Mr Ayoub, you mentioned earlier that workers that are working in the coalmining industries don't have that connection to our renewable energy transition. What role could the Government play in trying to better assist those workers to feel part of the solutions or feel some sort of connection to it? As I see it, they have a key role to play in terms of the skills that they have. Do they want to be part of the solution? That is the other question.

JACK AYOUB: I think they do want to be part of the solution. I think the easiest way to achieve their involvement is to formalise the process. You could have a regulatory framework that says, "This mine is coming to the end of its life in two years time or three years time. The government therefore requires that you create a committee process. The committee has to have X representatives on it and you need to keep these things in mind." I always return to the wellbeing budget because I think it's a good guide post. Are those the key indicators that these committees look at and say, "We want to go to post mining land use. Here are the options we are going to discuss. Here is what it will cost. Here are the key indicators government is imposing on us to look at." Really, it's a question of formalising these processes. It comes back to the central point that we can't—none of us are foolish enough to leave this legacy to the free market space, because operators are in it for profit; they will get out of it whatever way they can. They're gone and the communities remain.

The CHAIR: In terms of retraining, what have you heard from mining companies about retraining their workers in those mines that have flagged closure?

JACK AYOUB: In terms of other employment?

The CHAIR: Yes or retraining in any way.

JACK AYOUB: Not a great deal. In many cases, I think that's beyond their concerns. I don't have any examples to hand of employers that are proactively retraining their workforce for other employment opportunities beyond their tenure with that employer.

The CHAIR: Should they be?

JACK AYOUB: I think it's an important question to investigate. I don't know whether you want a regulatory framework that says they must, but perhaps that is part of the transition. It's not something I have turned my mind to, but it's certainly worth considering.

The Hon. WES FANG: Thank you very much, Mr Ayoub, for appearing today. Obviously, the AWU represents workers in a number of fields. We know that manufacturing in particular in Australia has been challenging. One of those challenges is obviously the high input costs, and one of those is electricity. Is it fair to say that the AWU is a big advocate for ensuring that we have a reliable, cheap means of generating electricity to ensure that we continue to have manufacturing jobs in Australia?

JACK AYOUB: Yes.

The Hon. WES FANG: In the previous term of Parliament I was on an inquiry and Misha Zelinsky, who was then the assistant national secretary of the AWU, appeared before that inquiry. He was particularly strong in his advocacy for nuclear power as a means of producing that effective base load power that is reliable and cost-effective. Is that still the opinion of the AWU?

JACK AYOUB: No.

The Hon. WES FANG: It's not?

JACK AYOUB: No.

The Hon. WES FANG: Why is that?

JACK AYOUB: We can rehash a national debate, but we certainly were very strong supporters of it right through the '80s and '90s because at that time we believed it was the right decision to take. It has been advocated by previous members of our union, as you articulate. But as we stand today, we don't believe that that is the right way forward, particularly when many of our industries that we look after—you look at BlueScope, Tomago, Molycop and others—are already transitioning their systems to use renewable energy and gas as a transition. What we want to do is advocate in their best interest and they're not entertaining nuclear. The economics don't stack up. We can rehash all of those conversations, but fundamentally we're representing their interest and they're already on the path to using renewables.

The Hon. WES FANG: So what's changed in the four or five years since Mr Zelinsky appeared before this Parliament?

JACK AYOUB: Well, four or five years has elapsed. We have lost time on this. You know, we can't afford to go back down the time tunnel and experiment with this. It's extremely expensive. It will take a long time to get up and running. And in the decade while we are wandering back down the time tunnel and all the investment goes overseas and elsewhere, those industries will die anyway. So, as I said, they're already transitioning towards using renewables with gas as a transition fuel. We're going to support them to keep doing what they're doing.

The Hon. WES FANG: Would you agree with me that the use of former mining sites for generation of nuclear power might be a win-win for the communities where jobs are potentially required for generation of electricity for manufacturing and for the greater populous, both in New South Wales and across Australia, to provide reliable base load power? That land use would be a very sensible, very economic way of rehabilitating mine sites and providing not only jobs but base load power to Australia.

JACK AYOUB: Yes, but again, it has many difficulties with it. On a thumbnail sketch it might appear as you characterise it; however, one simple consideration is that we don't have the workforce in Australia. We look after the nuclear industry work to exist in Australia—we have ANSTO and others. But the fact is we don't have those skills in this country. We can spend the next couple of decades building these power stations and building up that workforce that we can flick the switch on—it will work then. But I can guarantee you by that time, with the fleeing of investment to other countries and other jurisdictions, Molycop, BlueScope and others will have shut down.

The Hon. WES FANG: If I'm to break down the differences between when the previous evidence was given to the Parliament and now, the rollout of renewables has effectively stalled. There's not the capacity in the system for the renewable energy supply of power. The demands are only set to increase, if we look at the increased use of electricity in both housing and cars, given that some jurisdictions are looking to ban gas appliances. The

requirements are only increasing. That is increasing the price of electricity. That is, surely, going to create a risk to your members—the workers that you represent. Five years ago your union recognised that nuclear power was the only way to provide clean base load power. Are you saying that your workers can survive on a majority of renewable energy power alone to protect their jobs?

JACK AYOUB: Yes. We can achieve it, yes. There is an extraordinary confluence of things in your question.

The Hon. WES FANG: They tend to do that.

JACK AYOUB: I can't deal with them all. But the point is as I put it to you. These large manufacturers are already moving in the direction of renewables, using gas as firming. That takes some time, but it doesn't take anywhere near as long as it takes to build a nuclear reactor. You're already one step down the time tunnel. I mean you are back five years.

The Hon. WES FANG: So my final question—and it will be my final one, unlike Ms Boyd who tends to say one thing and then sometimes do another. My final question is are you 100 per cent convinced that the Labor governments', both State and Federal, move to renewable energy will not cost a single job of your members?

JACK AYOUB: We can't say that for certain. Transitions are difficult, they are complicated, but what we can do is be innovative in how we make those transitions, and that is part of the Mining and Energy Union's submission. I supported that submission. We know that as coal diminishes, certainly domestically over the medium term and internationally over the long term, there is a potential 12,000 jobs lost. Now we are here to discuss how best we ameliorate that. I don't agree with the underlying proposition of your question that we ought to build a nuclear reactor, because it's a long way away and those guys aren't skilled.

The Hon. WES FANG: I feel like your union was very supportive of it right up until it became Coalition policy, and then you've walked away from it at a million miles an hour. I think your members are going to be the—

The Hon. MARK BUTTIGIEG: Point of order—

JACK AYOUB: That might be my assessment, but I've spoken to a lot more of our members than you have I dare say.

The Hon. MARK BUTTIGIEG: There is a statement with a view to proffering an argument. If the member has a question, he should put it. Simple as that.

The CHAIR: I would remind all members about the procedural fairness resolution that the House has adopted. We shall move on perhaps.

Ms SUE HIGGINSON: I've just got a couple of questions. Thanks, Mr Ayoub. Are you aware at the moment in rough, rubbery terms of what actually could be the potential transfer of job for job into renewable energy generation within areas?

JACK AYOUB: No. I don't have those figures to hand, no.

Ms SUE HIGGINSON: What I am saying is has some of that work been done, and is that something you have? Are you looking at those, working on those, in terms of your representations to government and communities at the moment?

JACK AYOUB: We certainly are. Our national office will be looking into those issues and figuring out how best we navigate this. I'll use a bad example, a sad example. There was 250 people laid off at Molycop, which used to be Comsteel. A big part of that was that there were changes in electricity offers and so on, all that sort of stuff. So there is pain being felt here, but we are thinking about how best we move through that. As I've already articulated, many of the employers we look after are already well on the transition. It's a space we are deeply interested in, obviously, and trying to do our best to advocate in.

Ms SUE HIGGINSON: With that, that's an area where you think current New South Wales Government regulator work should be doing more to assist unions in terms of the actual transfer, job for job?

JACK AYOUB: I think so. It can't be left to an informal circumstance or outplacings, that kind of thing. We can actually have a formal process. I go back to that through line of the transition. The public at large have elected governments to make these transitions. The Government is making those transitions. It's therefore got a responsibility to the people who will be impacted, to bring them along on the journey. You would know yourself, being a public office holder, that you are always better off when you bring people on the journey, and it often costs very little to do so.

Ms SUE HIGGINSON: You referred to that you may have done that type of analysis yourself based on what is in the pipeline for renewable projects. Is that information that you might be able to provide?

JACK AYOUB: Potentially. I can take that on notice and see if our head office has it.

Ms SUE HIGGINSON: Thank you. We've received quite a few submissions to this inquiry, and one of them refers very much to the extinction debt that exists at the moment because of some of these projects generating that nature deficit, because of the industrial scale of these projects. I notice you said something very early on in your initial opening statement about lands and how, potentially, the best and highest is the repair, the regeneration for native habitat and so on. Are your union and representative groups supportive of that kind of nature-positive approach to the transition? Because it has been put to us in a couple of submissions, and I would love to know your view on that.

JACK AYOUB: I think our view is that we shouldn't be stuck in one train. There's going to be a different reuse of the land in every area. If we just lock up and say, "We're going to turn everything into natural habitat," that's probably not getting the best possible outcome. I'm just using examples here. If we have 100 per cent of land that's to be reused, perhaps 25 per cent of it gets jettisoned for a purpose that the public wants, whether that's a recreational facility, water, a motor park or whatever it is. Then the other 75 per cent is rehabilitation. I think we've got to be flexible in it, but we certainly wouldn't turn away from rehabilitation, particularly if that's what the community wanted.

Ms SUE HIGGINSON: Sorry, I have one more question. That's a lot of regeneration, ultimately, looking at a decade and important work, if we are to try to recalibrate the extinction debt, which is how it was best described to me in one of the submissions. Is there a workforce that is required in that work, and where does that workforce, as far as you're concerned, come from?

JACK AYOUB: It's sort of poignant in that, in the last couple of weeks, I've been dealing with some bush regeneration employers. They pay their people very little and they don't look after them. I'm having those fights at the moment and it's proving very difficult. But that workforce will have to increase; there's no question. In terms of Government procurement, if we're getting those people on board, we ought to be making sure that they've got the right working conditions. Another example of what will be required is seed. If we are going to have mass regeneration, we need seed. Don't tell anyone, but I wagged school quite a few times to go and pick seed.

It's not the most pleasant job in the world, and you don't get paid a terrible lot, but we're going to need a lot of that. Where's that all coming from? That will create industry and economic activity, of course. Then, the question for me is: What is the ongoing benefit to the community? If we have just done regeneration, yes, we can get jobs through that process, but have we got the maximum benefit? Perhaps it's as simple as the community wanting a path through this regeneration as part of some national parks initiative. How do we get the best possible outcome? It may not be regeneration. It may be re-industrialisation; it may be recreational use. But, yes, it's certainly true: There will be a workforce in that rehabilitation.

Ms SUE HIGGINSON: Just finally—

The Hon. WES FANG: There are a lot of finallys.

Ms ABIGAIL BOYD: We're good at that.

Ms SUE HIGGINSON: I'm sorry; it's the thing.

The CHAIR: It's fine.

Ms SUE HIGGINSON: You think you're finished and then, all of a sudden, you keep going. We're unstoppable, Wes. That's the problem. Mr Ayoub, finally, the 45 final voids. Is that something your sector is considering? I know that you gave the Western Australia example. We've got 45 final voids, and we're still trying to work out what that means for groundwater and equilibrium over hundreds and hundreds of years. Are you putting thought into what that looks like in terms of the beneficial reuse and the future?

JACK AYOUB: Not directly. I'm sure, certainly, the Mining and Energy Union was probably doing a fair bit of that work and that forward thinking. To pull out something from that example, it may be the case that only two or three of those pits need to be put to re-industrialisation or other community uses and the rest are rehabilitated, because it is a lot. Again, I think that's where we need to go to a formalised, regulated model where the community gets to say, "How best do we do this?" I would suggest that a community that's got four pits around it is not going to say, "We want them all turned into lakes." They're going to want a lake and some other stuff.

Ms SUE HIGGINSON: I think that's pretty good speculation.

JACK AYOUB: I wouldn't want four lakes because I burn under a strong light bulb! But I think we've got to do as best we can to entrust some authority into the communities and the workers affected.

Ms ABIGAIL BOYD: When NSW Labor first came into government, on the back of the election there had been a lot of talk about a fully funded transition authority, which we now are seeing as the Future Jobs and Investment Authorities model, but the policy platform has changed over time. After the last conference, I understand we now have something that's not necessarily fully funded and doesn't have as much focus on ensuring retraining and reskilling. From your perspective, what are the fundamental attributes that this transitions authority—whatever we want to call it—must have in order for it to be successful?

JACK AYOUB: One of the critical parts of it is who's paying for it. It's not optimal to say that the taxpayer should pay for it, because fundamentally what we're saying there is "Well, the mine operators come in, it's given us these really good salaries and jobs. That's their only social responsibility." Then we're going to say to the taxpayer, "Okay, you can foot the bill to fix this up." One of the parts of the submission is the implementation of a levy. I think that is an important way forward. We know that there are mines around the place that haven't been regenerated yet.

Ms ABIGAIL BOYD: So many, yes.

JACK AYOUB: So what are we saying? The taxpayer ought to cop that and the operators run away with the profit? A levy that goes into a central fund that would support the operation of whatever this transition organisation is doing is probably the most optimal solution.

Ms ABIGAIL BOYD: Any other elements, do you think, in terms of what that authority should do? We spoke before about having it being grassroots up, communities up. But in terms of the focus of that authority, how much of it should be on jobs? How much on reskilling? Is it really that it should be doing all of the things, and anything less than that is not going to work?

JACK AYOUB: It's got to facilitate all the things and be involved in each of those elements to a greater or lesser degree. Retraining, jobs, skills, all that sort of stuff—that has to be done in a formal way. You can't do that by consultation. It's going to have to be directly taking carriage of that, figuring out a way that people apply through systems and so on—I don't claim to be able to build a bureaucracy on the spot, but that's one element. If you're then talking about what we do with post-mining land, whatever the regulator, the authority or the commission is doing, it should merely be facilitating and overseeing the good-faith negotiations between employers, unions, community groups and others—councils, particularly. They're the closest level of government here and probably going to have to administer it. That's another function. I think it's got to be quite a dynamic force. We can't have a bloc that says, "We're doing transitioning." There are a lot of elements in that and each of those require a different level of force from government.

Ms ABIGAIL BOYD: One of the big worries is that as we move into new industries—again, because it has been primarily market driven so far—we will end up with lots of Snowy 2.0s, where we end up with workers' rights being trodden over and private enterprise coming and taking all of the benefits. Should that transition authority also have a role in ensuring community benefits in new industries?

JACK AYOUB: I think so, absolutely. If you were to set up a committee process, again framed by some commission, and that has key indicators—I mentioned the wellbeing budget as some example of key indicators—if that takes the decision collectively to say, "We want to bring in whatever company to do another Snowy Hydro-esque project", I think it's then incumbent on government to make sure that that's done in the best possible way and we don't have the mistakes we've seen in other places. Whether it's regeneration, recreational use or re-industrialisation, it has to be done with the best interests of community in mind, and that has many layers to it. But I think the Government has to be involved in that.

The Hon. PETER PRIMROSE: I think you have actually alluded to what I was going to get to in your answer to Ms Boyd's question, and that was the source of revenue to do these because there are endless wants—but where you actually get the money to do it other than from consolidated revenue. You mentioned the levy. Could you maybe elucidate a bit on that and indicate what else might be included there, for example, in terms of exploration licences—I mean, actually having a levy on an exploration licence as well rather than essentially having almost something you get out of a cornflakes packet at the moment. Could you possibly elucidate on that?

JACK AYOUB: I will do my best. I think you have done it for me. We need to be looking at how we guarantee the social responsibility of these organisations because no-one is under any illusion that they're making enormous profits, and there is a general sentiment in the community—I think held by almost all—that they don't repay that wonderful privilege they get to make money. Is it the case that you win an exploration licence you sought, there's a fee that's attached to that and it goes into a fund? Is there a levy that's paid based on the duration of the mine?

All of those things ought to be looked at, and they ought to be, I think, put into a central fund where we can then say, "The rehabilitation of this mine or the re-industrialisation of it costs x, y and z." If something is being re-industrialised, a mine pit is being re-industrialised, it's probably more likely that the company re-industrialising bears most of the cost and the Government doesn't have to. But certainly in regeneration, re-habitation, it would. I think that there has to be some way of getting revenue because the current bond scheme that came through the amendment in 2021 obviously isn't working. The term "full cost" is a flexible one. The Auditor-General made a submission that it has to be increased by 25 per cent or 50 per cent. I think a levy is the best way to go, and I think there are many points at which a levy could be paid.

The CHAIR: Thank you so much, Mr Ayoub, for taking the time to appear and give evidence to the inquiry. The Committee secretariat will be in touch with you about any questions that were taken on notice.

(The witness withdrew.)

Mr MARTIN RUSH, Policy Director, Association of Mining and Energy Related Councils, affirmed and examined

The CHAIR: Welcome to our next witness. Thank you so much for making time to give evidence to the inquiry today. Would you like to start by making an opening statement?

MARTIN RUSH: I thank the members of the Committee, and the Parliament generally, for this inquiry. I represent here today an organisation of 17 mining and energy councils in rural New South Wales. This is an extremely important matter for them. We only have one chance at the issue of economic transition and getting it right. I have seen communities in Europe, particularly in northern England, where it has not been done well. Even 30 years after the event disadvantage continues, so this is something about which I am absolutely passionate—that we get it right—and so are the member councils of mining and energy councils.

I want to make four key points, and then I think the value will, no doubt, be in the questions. The first is that strong governance around that is critical in whatever mechanism or vehicle is chosen to undertake the task. It can't be, if I might say, general community representation. You want the actors with tools and capacity at the table as partners in the transition management process and, typically, that's all levels of government who bring different strategic intervention tools and powers. It's the knowledge sector who bring leading practice and who bring diverse skills and expertise in various disciplines. It is the worker unions who are critical and, of course, key parts of industry in the energy and mining sector because they bring powers to have whole-of-family adjustment programs and all sorts of other worker transfer schemes and other powers that the government, despite its broad reach, can't reach into. We want those tools at the table.

Early intervention is critical as well. One of the leading practice learnings from over the last decade is that early intervention does make a difference, particularly in building adaptive capacity in these workforces, and that the whole of the community matters. These are international-scale industries, operating in often very small rural communities. The Hunter, for example, accounts for some 14 per cent of globally traded thermal coal. It's not a small industry. Asking particularly the smaller communities of the Upper Hunter to manage that transition, and loss of value-added production over a relatively short period of time, is far too challenging for those small communities without the support of the level of government that has responsibility for regional economic development, including regional economic transition: the State Government. Finally, the timing of the interventions is critical. I thank you very much for the opportunity to give evidence. I look forward to answering whatever questions you may have.

Ms ABIGAIL BOYD: Good morning, Mr Rush. Thank you very much for coming and for your submission. I was wondering if you could talk to us a bit more about the Muswellbrook Shire Council example. My understanding is that there were different stakeholders coming together who then pitched the plan to the companies involved. I'm curious as to whether any financial assistance was then given by AGL and—I'm going to say it wrong—Idemitsu. How did that work in terms of the financial backing?

MARTIN RUSH: The council did bring significant financial resources to the table, and that was used to leverage both financial and in-kind contributions but, more technically, financial contributions from the upper levels of government. But there were financial contributions, particularly from the mining sector—and not always the mines directly involved, because of the arrangements that council had struck through voluntary planning agreements with the broader mining industry. But, more typically, it was in-kind contributions from industry, and particularly from the workforce union, the Mining and Energy Union. Council really did play a facilitating role in making sure that the efforts that were being undertaken were the right ones—the best value for the resources being deployed—but also making sure that there was probity around those strategic interventions, particularly where proposals were for further development on the land. It was very careful to make sure that there were probity and governance arrangements around that.

I think what worked about that model was that the people with capacity and the tools to make a difference, whether it was the negotiating of, in that particular case, worker transfers to other parts of Idemitsu and other parts of AGL—the Liddell Power Station was closing but, of course, AGL also have Bayswater Power Station to which it could transfer part of its workforce. A no-forced-redundancy policy—it's not something that the Government can reach into, but leading corporate practice, together with leading practice workforce union policy outcomes, can negotiate in the best interests not only of the workforces and their own corporate ambitions but also the wider community, because you've preserved that economic value and those skills in the community.

The point I would make is that having a governance vehicle, as is proposed in the issues paper for the governance transition authorities, that is made up of local representation but not necessarily representatives of the key stakeholders is, in my view, not leading practice. We want at the table local government, bearing in mind that those two consents are local council consents in the Muswellbrook example. Both the Idemitsu coalmine and the

Liddell Power Station were local government consents. They weren't State Government consents. Therefore, local council had a particularly important role to play and ought to have had a seat at the table. One of the fears I have and one of the experiences I have had historically is that local government, when they're invited to have some representation in these vehicles, has had a representation which has not been a direct one, or an ex-officio one. That matters from an accountability point of view. You want your local government rep to be accountable on behalf of the council or the group of councils that sent them there. They have a job to do and it's not just representation. Accountability, of course, is equally important.

Having the workforce union at the table, not as a representative of unions generally but a representative of the union most directly and intimately connected to the transition management task, is critical. Having the industry there—yes, there are probity issues around that which need to be managed. Of course, when council engaged in some of the work it did, for example, the pumped hydro energy scheme work at Bells Mountain, which was a council feasibility, we clearly did not announce in advance that work was being done, either to the two industry players or indeed anyone outside of the council. We went through a very transparent tender process in making sure that project went ahead and, as you will have read in the submission, that project was ultimately won by the partnership of Idemitsu and AGL, who happened to be at the table, and it happened to be their site. So it was, in one sense, obvious that they were going to win it but, nonetheless, we went through a very transparent and independent tender process to bring that about.

But having those entities at the table and exploring the sorts of options that might give rise to further economic investment is critical. They have very valuable water resources, land resources and, of course, extremely valuable labour resources, worker resources. That's something that is worth capturing in these regional economies and redeploying. They also have very valuable built infrastructure as well, most of which is slated, under planning consents, for decommissioning. That might, nonetheless, remain the best outcome, but not always. In the case of Muswellbrook Coal, which for most of its 105-year continual existence was an underground mine—in more recent decades it was open cut—it still had very valuable hardstand, very valuable infrastructure which could potentially be, and in part now has been, re-used for other industrial activity or is proposed for other industrial activity. They're very valuable resources and, if the decommissioning costs associated with some of this infrastructure can be avoided or delayed, it is a very powerful, in-kind investment to the transition effort.

Of course, that is only valuable if it's planned well in advance and has a very genuine public benefit. It should never be deployed in spite of environmental and planning responsibilities. The holder of the land or whatever the resource is, whether it be built or land or water or whatever, they are very focused on winning coal as efficiently and as affordably as possible, or producing energy as affordably and reliably and sustainably as possible.

But when they start to turn their mind—and one of the great innovations in planning law in New South Wales is to bring a lot of that planning forward. There is a lot more work to be done, particularly around the social planning and making sure the social planning is happening 10 years out. We do a lot of the environmental planning now 10 years before closure or longer. In fact, we're planning continuously for the environmental outcomes from the moment a new mine starts, but not so the social impact. There is no requirement often for a social closure plan. But that is equally as important because in places like Lithgow, for example, 43 per cent of the economy comes from these industries and will disappear over a comparatively very short period of time. That's not without significant disruption. Of course, those figures are even bigger in the Hunter because of the scale of the industry.

Ms ABIGAIL BOYD: As part of that Muswellbrook case study—I have two questions. Firstly, was there any community benefit scheme in the new projects that were being proposed and is there a direct community benefit in terms of financial amounts coming back into the community from that? And the other one, which is probably the more important question, is in relation to the clean-up of Liddell. We know that that's an incredibly polluted site. There's a whole lot of coal ash sitting in unlined pits. Was best practice rehabilitation of that site part of the overall community plan?

MARTIN RUSH: I think the Liddell plan, in terms of leading practice, is still in its very early stages. I do want to keep making the point that the earlier we can get into this in some sort of responsible way and collegial way in terms of the actors at the table, the better. And you will remember that some of the ambitions of AGL were somewhat curtailed by what was happening at a Federal level in terms of energy policy and various changes in direction. I think AGL to some extent changed their direction as a consequence of some of that politics at the Commonwealth level. But I think their plan was a good one and remains a good one in terms of the re-use of those very valuable assets. Often these companies have, on their asset sheets, hundreds of millions of dollars in remediation liability for the decommissioning and remediation, rehabilitation of these sites. If that can purposefully be used without reducing the environmental consequences and the ultimate environmental outcomes in a way that also generates economic and social outcomes, I think that's extremely positive.

Capturing value from these projects is something that needs a lot more work—in terms of the new projects I'm talking about, capturing that value. It's one thing to say that Lithgow, for example, has 43 per cent value-added production from coal and energy at the moment. The industries that are likely to replace it moving forward won't generate the same component of income from labour that the labour component and income that these other industries have historically. But we can still capture it. That might be through benefit-sharing programs, through different models of taxing, through voluntary planning and other planning contribution arrangements. And a lot of that work will depend upon the type of development that will replace it.

For pumped hydro, the council will no doubt be able to capture some of that value through the rating of that system, which is still half, if you like, a thermal coal power station. It's still got the generation site. It's just the energy coming into it is very different. So it will still have considerable jobs. A lot of the other renewable projects and other projects proposed will have considerable jobs. As it happens, the work on the Muswellbrook coal site is likely to have more operational jobs than when it was a full operating coalmine. But there are other ways to capture value, too. I think we just need to be more flexible about making sure these communities have that value coming back into their economies.

The CHAIR: Mr Rush, in some of your remarks you touched on planning. Obviously this is going to be a key part of ensuring that mining transformation occurs. What are the key planning levers, from a mining and energy council's perspective, that can be activated to achieve positive outcomes in these mining-impacted local government areas?

MARTIN RUSH: There is considerable specificity around environmental considerations in the mining and energy State planning policy. In our respectful submission, that same specificity isn't attached to the economic and social considerations, and I think they could be improved. You will remember not so long ago that primacy in the triple bottom line assessment was given to economics, and that has been reversed. But the community does matter. Very often it's the communities in some of these coal regions—and I think particularly of northern Europe and northern England. It's the next generation that sometimes bears the full impact of the transition in a way that the existing generation doesn't as much.

Making sure that those community considerations are also specified in terms of more concrete outcomes are important, and leading practice is going that way. For example, when AGL abandoned its coal seam gas ambitions in Gloucester, they set up a community fund. If such a fund were deployed more generally in these larger mining activities across the Hunter, as a reflection of corporate-leading practice of the type AGL delivered into Gloucester, the outcomes could be enormous. But we don't have that framework set up. The social criteria in the mining and energy SEPP is, if I might say, underdeveloped.

I think there is fertile ground to specify that in a much more solid way. I know that the Net Zero Economic Authority—as I hope it will be—has some considerable teeth to do some of that work to encourage the corporate sector to manage these transitions in a leading practice way, and I'd certainly like to see that. The vehicle to do it in New South Wales would be the mining and energy State planning policy. Certainly mining and energy councils have some fairly advanced suggestions in what some of that social criteria might look like in closure planning and the time in which closure planning needs to be considered—well before the final mining operation plans and, really, it should be something that's thought about from the day the first sod of soil is turned.

I think there are other ways that industry and others could be levied to make sure this is done. Another critical point is, of course, the earlier it's done, the less public subsidy required. So it's in everyone's interest, particularly those being asked to provide a subsidy or some other strategic intervention, to want that intervention to occur now and not, as the present state of play, in 2028, before which time transitioning communities do not have access to resources for rejuvenation, for example.

The CHAIR: You mentioned you had some advanced suggestions about what those considerations could be. Are you happy to provide that to the Committee, either now or perhaps on notice if that's better for you?

MARTIN RUSH: On notice in terms of detail, but certainly I can provide more detail. An enormous amount of work has been done to improve the cost-benefit assessment process by Treasury in New South Wales. But I think a lot more work could be done around the assessment of the cost benefit of soft infrastructure, which tends to be more community-based infrastructure of enormous value. We know, for example, from evidence in other transitioning regions, that one of the best investments you can make is in the adaptive capacity of the future workforce, the emerging workforce, and that's often made through investment in science, technology, engineering and mathematics education.

You don't see the return of it, often, for 10 or 15 years because the leading interventions are in the first few years of primary school education. But we know—and Committee members will know this was the subject of some consideration also by the Australian Productivity Commission in its 2017 regional transition review—

that long term they're some of the best interventions, but it is hard to measure under the existing Treasury guidelines, in terms of the cost-benefit outcomes.

We can do a lot more of that work, I think, to build much more specificity in and around the mining and energy State planning policy in terms of where we would like to see the workforce outcomes, particularly in those communities where the mining and energy is very intense and the proportion of the economic value is very large. In those circumstances, these international-scale industries do have an obligation to reach beyond their direct impacts and look at what impact their departure from that economy would have, including on people not directly involved in the workforce. When you have a retreating workforce, it also means you're losing the nurse that's married to the coalminer, and so on and so forth. You do need to consider what those externalities are from your corporate operation and you need to understand that in a whole-of-community context.

The CHAIR: Which mine sites have you and your organisation identified as being key post-mine sites in the Hunter Valley, in particular?

MARTIN RUSH: It's a difficult issue. We haven't identified any as an organisation. It's a case-by-case situation. One of the advantages that Muswellbrook coal had is that the void that's to be reused for pumped hydro was identified because it was impervious in terms of water penetration. Most voids aren't. As soon as you have to line a void, it doesn't really become economic to provide it. You need around a 600-metre dropper zone to stand it—from that Stocks and Blakers ANU academic article—for it to be economically repurposed for pumped hydro ordinarily. It depends on all sorts of other things, but you're looking at that drop. Bells Mountain is around 550, but it's very close to other infrastructure. We knew when we looked at that site, but we looked at other things too—the quality of the wind resource and the quality of the solar resource. We looked at what the other voids might purposefully be used for.

In the case of Mount Arthur, where the void is six to eight kilometres, that will not be without its challenges. Whether it's purposeful for pumped hydro is for experts to comment on. It is the case, I have to tell you, that every mine will be different. The department responsible, mining and geoscience, if I might say, promised to look at this for some considerable period of time on a mine-by-mine basis. As I understand it, at this stage the only level of government doing that work for those mines is local government, which doesn't have responsibility typically to do it and certainly isn't resourced to be able to do it. It was council for the Muswellbrook coal site. It was council for the Liddell site. I understand Singleton Council is undertaking that work in the Singleton local government area, and Lake Macquarie in its local government area. It's time for the State Government to come to the table.

The CHAIR: I understand that you work closely with Lithgow City Council, speaking of local councils, on its local plans. In terms of Lithgow and the Central West of New South Wales, where do you see are locations to invest in economic diversification to create these long-term, stable jobs that we need?

MARTIN RUSH: It has got to hinge off a region's competitive and comparative advantages. If it doesn't, frankly it's a waste of strategic intervention and public money, because these things must be able to stand on their own two feet sustainably in the long term. That means they've got to be competitive internally. For Lithgow, the council has identified its water resources as being extremely advantageous. It has a large catchment, and it has very little evaporative loss. We know that's a real advantage. When industry does not need to as intensely use that water resource—it is presently used for energy generation in the main—that is a real advantage that that community has to attract new industry, and high-value industry at that. Some of that will be renewables. We know that proximity to Sydney, particularly the new Western Sydney airport, will be enormously advantageous to the Lithgow community, as well as the comparative affordability of its land. We know that it has a very skilled workforce in particular industries that can be re-put. We know that its proximity to key infrastructure and rail—and gas, in the case of Central West—is enormously advantageous.

They've identified, as part of the Lithgow emerging economy plan, a range of industries that they want to explore attracting to the local government area. One of the issues for Lithgow is the availability of industrial land at market to be able to attract investment. That's why some of the forward planning that transition management should be undertaking now is so critical. On the supply side, adaptive capacity of the workforce is something we need to be doing now. On the demand side—the job creation side—we also need to be looking particularly at the planning system, and making sure communities like Lithgow have the resources they need to identify and support, with infrastructure, the sort of land that will attract investment at scale.

That's their problem number one at the moment. Any resources that could be brought to bear to overcome that would be great. I don't want to sound simplistic about it. I'm someone who works closely with Lithgow council. I know it to be true that we do not, at this point, have industry land at market. It's a huge issue for us and we are doing our best to overcome that problem. In terms of specific sites, there are a range of ex-energy as well as mining sites in Lithgow that could be re-put to an economic use. We are confident of that, but there is work to

be done to get them to market. It's one thing to have a site which looks, on paper, to be very valuable because of those utility, proximity and resource connectivity issues. It's another to have them ready for an investor.

In a previous life, I worked in Muswellbrook council. I know, because I dealt with it almost on a fortnightly basis, a party—often a very large international party—wanting to consider the Liddell site. But, once they realised the zoning wasn't right, the infrastructure wasn't correct and that key aspects of the planning system weren't ready, they walked away for other international sites. We're talking about large data companies and other companies that would have added enormous value to the New South Wales economy. We need to get those sites at market and ready to be the subject of investment.

The Hon. SCOTT FARLOW: I'm just picking up on those points you've made. Firstly, would you take it on notice in terms of the updates you'd like to see to the SEPP? You said they were fairly well formed. I'd be interested for this Committee to have a look at those as we're looking at making our recommendations.

The Hon. WES FANG: Just on that, Mr Rush nodded. That might help Hansard and the Committee's secretariat acknowledge that he took it on notice.

The Hon. SCOTT FARLOW: To that point as well, in terms of the post-mining land use, for the mining companies themselves, in many ways it would be easier to transition these sites to effectively non-productive uses that could, in some cases, be the most cost-effective way to rehabilitate a site. In terms of going through that process, what do you think that the Government can do to be able to broaden some of the uses that you could have for post-mining land usage? As you've outlined, some of that comes down to fairly simple changes in zoning and the like to be able to have them ready to go, so to speak, to the market to continue to have as a productive use.

MARTIN RUSH: It's not for me to work out where the proportion of funding should come from to do the work. In terms of the work that, in my view, needs to be done, a site-by-site master planning and analysis of the best uses of those future sites should be done. It should be site specific for every site. There's no way that you could easily do it as a survey of all sites in New South Wales. It needs to have the key parties at the table when that work is done, including the workforce unions, the knowledge sector, the particular industry player involved, as well as all levels of government when that analysis is done and reviewed.

Every site will legitimately be different. There are some sites where built infrastructure will struggle as a consequence of historical underground mining, for example, where the grouting cost would make any further built work challenging from an economic point of view. There are other sites that sit within critical areas of macro-landscape connectivity across New South Wales. I think particularly of some of the mines in the north-west of Muswellbrook shire which sit between the World Heritage area and the Great Eastern Ranges. Those are open-cut mines. Unquestionably, in my view, the best re-use of those sites is for remediation and rehabilitation to first-class native vegetation.

There are other mines that are sitting in areas of considerable industrial disturbance—where the environmental values that could be achieved aren't as valuable—that might happily be re-put to some economic or social use. Every mine is different, and I think there is no escaping the hard work of doing and requiring a long-term planning outcome that considers those triple bottom line assessments. I think the Government will have to play a role, given the consensus for one, and there'll be all sorts of sovereign risk arguments if this work is landed upon industry to do solely. I think industry has a role to play in the resourcing of it and a very serious role to play in the resourcing of it, but I think government, too, has a role to play.

The key points for me are the right people have to be at the table. It can't just be the industry player; it needs to be others that bring tools to the task. The Commonwealth Government for the Muswellbrook coal site, for example, was very interested to make sure that essentially the extension of the Hunter expressway as a Muswellbrook bypass had sufficient grade-separated interchange at that site to enable the pumped hydro, the wind and the other composting and other activities. The Commonwealth Government has a role to play, and sequencing and timing that infrastructure so that it's just not gold-plated is what it might bring, for example. The Commonwealth has an interesting interest, as we know, around the industrial transition as well, for workers.

The State Government has, particularly at the mines that it regulates through the planning process, a role to play and perhaps even separately of planning. I mean, planning do need to sit back at arm's length and regulate and assess all of this, but there may be capacity through these authorities that are proposed by the Government to do some of that work with planning expertise that sits separately of the regulators and independently of the regulators to be able to undertake that work and provide more than just a concierge but also be at the table, really trying to identify what the advantages at the site are, from a whole-of-State point of view.

That's the other thing about comparative and competitive advantage: It ceases to have those benefits if everyone's doing it. You really do need to identify what is the real advantage, not the imagined advantage or the wished advantage, of that community's economy. It's important to have other players than mere industry. I don't

diminish the role of industry; it's critical. I found in a visit recently to Latrobe Valley that some of the greatest economic inputs were being made by the mining and energy union, who looked at some of the proposals of some of the key actors who were managing the transition there and said it was never going to work. Why were they investing in these particular jobs? They had a sense of reality about the outcomes for their workers, and, of course, they're invested to make sure that their workers are getting the highest-value jobs reasonably possibly in that economy. So having them at the table is valuable.

Also, from a community perspective, having a shared narrative and a shared accountability actually does work for transition because you'll have everyone really impassioned to do this correctly and to make sure it works and not to have a combative process but a collegial one and a collaborative one. I would certainly encourage that as well. But, yes, I think the State Government, particularly, does have a role to provide so much funding as is necessary to facilitate the collaboration and to do whatever early studies might be required to identify what the comparative and competitive advantages are and do those very critical triple bottom line evaluations of the site.

The Hon. SCOTT FARLOW: You've outlined in your submission, of course, the Idemitsu example—and we have heard about that earlier today as well. Seven years was the time line that was given in terms of notification. Is seven years adequate or is there more time, ideally, that you would like to see in terms of notification of a closure in arrears?

MARTIN RUSH: I think seven years is reasonable. I would say that 10 years is optimal. That's what I would think, because of the workforce issues, particularly. If you're doing strategic interventions in a school system—and the schools are geared and the guidance, particularly the parental guidance but often the institutional guidance, to students doesn't direct them but pre-supposes often, even if indirectly, a particular job's pathway that may not be there in 10 or 15 years. If you're intervening with STEM education, particularly, when a child is nine or 10—they're entering the workforce 10 years later. I think some of the labour supply issues, some of the workers supply, the adaptive capacity of the workforce—by which I mean geographic as well as occupational mobility—are so critical to making an economy resilient and managing a transition because you don't quite know where the new jobs will be, you don't quite know what the economy will look like. We also know that those skills will combat things like automation, in any event, and make the economy more resilient. Those really do need 10 years.

Lithgow, for example, won a Commonwealth grant in recent times—a net zero stream Commonwealth grant from the larger National Priority Fund—to do some of that early intervention in the primary schools and indeed some of the secondary schools in Lithgow. You will have great outcomes. A better bang for buck you couldn't have, but that 10 years will be required to do that. For some things, planning outcomes will need a long lead time. I mean, if everything went smoothly in a planning process from go to whoa it's three years, but I've not seen one go through in three years.

The Hon. SCOTT FARLOW: That's gone smoothly?

MARTIN RUSH: I was in Muswellbrook when the rezoning for Liddell started and that would be eight years ago. As far as I know, they still don't have a rezone of the SP2 zone. These do have long lead times. I really talk about the planning and the workforce planning. They're the things with the longest lead time, but I would encourage you to think about 10 years. If it lands at seven years, no-one's going to be upset. That's reasonable. The Federal Government, I think, is at about there and corporate leading practice is what, I think, seven years is what Energy Australia, for example, has undertaken to provide—and I think in fact has provided in the Latrobe and I'm sure will provide to Lithgow for the Mount Piper Power Station—but perhaps 10 years would be optimal.

Ms SUE HIGGINSON: Mr Rush, I just want to ask you, on that land use planning, is it a consideration or a concern for you—and you touched on it—about the safety issues and that safety assessment? Cessnock, Singleton, Muswellbrook and Lake Macquarie all made very strong points in their submissions to this inquiry about the structural capacity of land post-mining is the biggest factor. I think there were some examples of one of the older collieries in the Cessnock area about sinkholes and instability, and you mentioned it about the underground, but you didn't put anything about that in your submission. Is that because that's an assumption you're making because what those councils' submissions are suggesting is that that would be quite a large area, particularly the final voids and the instability around those in terms of any industrial re-use, compared to the need to regenerate them for natural land capacities?

MARTIN RUSH: It is the law now to leave these sites safe, stable and non-polluting and that is old law. It's not new and it's a hard requirement of the Mining Act. I don't know if any mines have ever achieved it.

Ms SUE HIGGINSON: I think that's the councils' submissions points, yes.

MARTIN RUSH: To get particularly the ecology self-sustaining and self-propagating at maturity is not a short task. You're talking about a canopy layer, a middle storey layer and a ground layer of sufficient variety in the endogenous vegetation that's self-replicating, propagating and self-seeding, and it's been able to demonstrate

that for long enough that the mine should be given relinquishment. I don't think it's ever happened, but it is a long task. It's a very onerous task. But that doesn't mean that parts of sites might not be relinquished if they achieve that completion criteria early, nor does it mean that we shouldn't look to see whether, for some mines, there may be some re-use of hardstand and built infrastructure as well as utility and transport infrastructure that couldn't be re-used in the interim for some other economic or social purpose, with the costs that would otherwise be required for relinquishment or decommissioning of that infrastructure re-put for some other purposeful use. I think there is value in looking at that. A lot of these sites also have heritage value that's worth exploring as well.

Again, it's a case-by-case assessment. We should never forget that the ecological values are real values—again, a little bit softer and harder to measure but reasonably well specified, if I might say, in the mining and energy State environmental planning policy. We do know what they are and they are planned early. The criteria isn't, in my view, too bad. I think it's pretty strong, which is one of the reasons they're struggling to hit them. The other thing is that they are living conditions in the sense that they are able to be updated from time to time as well to make sure that they retain a leading practice edge. I think it becomes harder on the social issues to really define what those outcomes should be for a community and how a large international corporation operating in a small town might best transition or best reach completion, in terms of its closure, and reduce the consequential negative social impact on a small community. That's where I think a lot of the work needs to be done in the shorter time in terms of the planning instruments.

Ms SUE HIGGINSON: On that, can I ask you to elucidate one point? It's not a matter of simply changing an instrument to zone re-use. Those fundamental investigation aspects need to happen, whether it's the safety issues, the stability or the undermining of the particular areas. Otherwise, if we were to take a non-site specific approach, we could end up in some serious trouble down the road, because, as you say, there may be a legal obligation imposed through a post-consent condition but it might not actually in fact be achieved, and we need to understand that before we can rezone anything.

MARTIN RUSH: For parts of the site, for sure. I can't see that the enormous number and scale of voids in the Hunter will all be able to be purposefully re-used any time soon. There will be some but it certainly won't be, in my assessment, all of them, by any stretch. They will have to be monitored now. Some of them are very deep. Some of them aren't benched back to the most modern of standards. Of course, we know that for the undergrounds they are not all grouted. Most of Muswellbrook is undermined and most of Lithgow is undermined and not always mapped. These issues will be going on. But that doesn't mean that the whole site is without value. The vast majority of the open cuts will be put back to either some purposeful environmental value—sometimes some fairly low intensity agriculture or grazing, particularly. But that doesn't mean you can't have a more intensive labour use. That's what matters in terms of a local economy. It's one thing to have land and to put it to a use. What really matters is the optimal use in terms of adding value to an economy.

Ms SUE HIGGINSON: Does it concern you at all that the condition to permit a final void in every circumstance in New South Wales was justified on the basis that it was too expensive to do otherwise, to have to refill? Is that a concern or is that something we have moved on from?

MARTIN RUSH: I'm on record wearing a different hat about my view of that over the last 15 years. My own view is that it ought not to have happened, but it has. The issue that we now are faced with is how best to use these envirovoids most purposefully. It may come down to a number of them will just have to be benched back and monitored over the next thousand years or whatever it is. The reality is that evaporation loss in the Upper Hunter exceeds rainfall, with the exception of groundwater, which is where a lot of the void filling up will occur. Not a lot of it is going to come from rainfall filling up these voids. Many of them, if not all of them, will remain dry in perpetuity, except for some groundwater, which, because of their confined catchments, risk becoming hyper saline. That is the reality.

Not all of them will be assessed to ever be economic. We know what the criteria for economic pumped hydro is because that work has been done by the ANU. We know what the broad criteria is, and we know that—we did a look at all our voids in Muswellbrook against the criteria, and there were two that were economic. It's not for me to say what the other one was because it's the council's confidential information, but we know what one of them was because it has emerged as the Bells Mountain pumped hydro scheme. That void has particular advantages. It had a rocky and impervious envirovoidment. I think it's void one—I may be wrong. The others on that site don't. They are not suitable, for example, for landfill waste because of leachate into the groundwater. There may be other uses to which they can be put. One of them is relatively small, so it's conceivable that some use might be found for it. But when you look at the Mount Arthur void in particular, it is a very large void. I mean, it is six to eight kilometres long and at some considerable depth.

Ms SUE HIGGINSON: It's massive.

MARTIN RUSH: Quite what use that would be put to is not something that I can immediately conceive, but maybe there is a use to which it can be put.

The CHAIR: We are out of time, but I'm going to indulge Ms Abigail Boyd in one final very quick question and answer.

Ms ABIGAIL BOYD: This is a very super quick question. I note that in your submission you talk about the coal-fired power station land not being included in the current proposals for the future jobs and investment authorities, which I found curious as well. Is that consistent with other examples of these sorts of authorities around the world?

MARTIN RUSH: No, it is a bit unique. They are, in many parts of New South Wales, vertically integrated industries, as they were in the La Trobe, as they are in Collie, as they most certainly are in Lithgow. Mines in Lithgow, with one exception, don't have the ability to export, which is one of the reasons Lithgow sits in a—despite the scale of the Hunter's issue in terms of transition, which I came to before in terms of its proportion of globally traded thermal coal, Lithgow won't switch to export in the main. When its power station closes so does its coal industry, which gives it a certain priority in terms of government intervention, in my assessment.

The Commonwealth legislation has—in its net zero economic agency, which does have a net zero and energy focus—nonetheless, roped in coalmines that are associated with that power industry. It hasn't roped in export mines, which is a distinction which is somewhat artificial, I think. But, nonetheless, New South Wales, because this was mining legislation and not an amendment to planning legislation, the mines are the only ones considered under Royalties for Rejuvenation in the proposed authorities. But it is certainly Merck's longstanding position, as well as, I think, local government more generally, that there is no proper distinction to be made in the transition. This is an energy transition of both thermal coal and thermal coal power generation, and we should treat them together.

The Liddell power station site is a very significant reuse site and would benefit from the work this Committee is doing, as the Mount Piper and Wallerawang sites, now Greenspot, would benefit from doing in the central west. I would certainly encourage the Government to consider, when it creates its bespoke legislation to take that opportunity to reach beyond mines and to include the power sector. For a region, it doesn't distinguish. Often the problem, from a macro point of view, is better looked at in terms of a whole-of-industry point of view and a whole-of-community point of view than pretending that the mine and the power station aren't in some way connected in this transition.

The CHAIR: That's all we have time for. Thank you so much for making the time to give evidence to the inquiry today. We really appreciate it. The Committee secretariat will be in touch with regard to questions taken on notice.

(The witness withdrew.)

Mr GRAHAME KELLY, General Secretary, Mining and Energy Union, sworn and examined

The CHAIR: Would you like to start by making an opening statement?

GRAHAME KELLY: I wasn't going to, no.

The CHAIR: We will move straight to questions in that case.

Ms ABIGAIL BOYD: Good morning, Mr Kelly. I wanted to ask about your proposal in relation to a levy at the end of the submission. I believe that your union has been quite supportive of the Queensland royalty rate and the progressive royalty rate that they have for coal in Queensland. I know we've made some advances in New South Wales on that. Would you be advocating for a higher royalty rate here that then sort of feeds into that levy idea?

GRAHAME KELLY: What happens in Queensland is the Government comes out with a proposal and talks to the unions and other companies about that and they reach a position on it. Our union is pretty much on the record, given how old we are, that we do support companies paying their way and getting charged levies. In New South Wales, we are not opposed to what the New South Wales Government has done, either. It's a bit of horses for courses, I think. The idea of our levy in our submission is there is a lot of land that could do with some further rehabilitation and we think creating a levy that creates a pot that allows you to do that is a good idea, as opposed to skimming money off the mining companies to do something elsewhere. It's got to be targeted is, I suppose, my point.

Ms ABIGAIL BOYD: One of my pet concerns over the last almost decade is in relation to coal ash and these coal ash dams that sit at the coal-fired power stations and the difficulties in rehabilitating those unlined pits and then using that land in a productive way once coal-fired power stations have closed. Is that something that you have looked at? Should the Government be considering those coal-fired power station sites in the context of the future jobs transition authorities?

GRAHAME KELLY: I think there are some challenges with the ash dams; there is no doubt about that. Just 10 seconds worth of history: I was a coalminer for 18 years before I became a union official for 20 years. So I have been in the industry. I come from the Hunter Valley, so I am alive to what they do there. For example, not all ash dams are ash dams. As Mr Rush was saying, there are a lot of voids around there. My family grew up on the back of my father working in what was then the Costains mine, which had like seven or 10 voids left there on purpose to fill them with the ash from the power stations which were directly across the way. In some respects they do their purpose well.

Of course, the advantages of ash dams in some respects in a closed environment is there has been a lot of research suggesting that you could use that as a lighter building material and the like. There are lots of opportunities to do that, but I would recall that in my time there has been two or three of those proposals come up which sort of never get through the final hurdle. I have no idea why, but I think at the end of the day using the ash dam effectively is a good thing. Can you cap them? You can cap a tailings dam. I come from the prep-plant part of the industry and you can do that. And if you can cap a tailings dam which is predominantly liquid, I'm pretty confident you could cap an ash dam if you were of a mind, but I'd hate to think of what the money was. There is one, of course, at Lake Macquarie near Eraring, which is probably a challenge to everyone. I have no concern about companies that make a lot of profit being made to make sure that that's safe in perpetuity.

Ms ABIGAIL BOYD: I initiated an inquiry in 2019, which reported in 2020, in relation to the coal ash dams. The problem is that if you cap them, you still have leeching because they're not lined underneath. But, as you say, there's huge potential for coal ash recycling on site, and part of the recommendation from that inquiry was that we consider that as a viable transition industry for people coming out of the coalmining and coal-fired power station jobs. Is that something that your union has looked into?

GRAHAME KELLY: Not directly. Our view with jobs for coalminers who are, at some stage, displaced is that they should be good economic jobs. They should be jobs that pay a similar amount of money. One of the great challenges I see with Government—it doesn't matter which persuasion—is simply that when you look at the number of jobs, you look at the number of jobs that are lost and not the economic value of the jobs. You could easily turn around and replace a whole heap of jobs for my members in the Hunter Valley, for example, where they're earning \$150,000 or \$170,000 a year, with an equivalent number of jobs getting paid \$80,000 a year. The economic loss to the region would be enormous. It's making sure you compare oranges with oranges.

The Hon. WES FANG: Mr Kelly, thank you very much for appearing today. In relation to the idea of levies in order to rehabilitate sites, do you think that in relation to mining sites, consideration should be given at

the time when approval was given to money being set aside at the start so that that could be planned for into the future?

GRAHAME KELLY: It's always a great place to be in history, to be able to look back and judge others. I'm not one who would suggest that's a good outcome. I think you have to learn from the lessons of the past and go forward. A lot of my members would tell you that solar farms and wind farms are great, but we really should have a circular economy where we make sure that all the waste is taken care of, because if you go back to mining and you look at what we've done in mining, from the time I started in the industry or the time my father started in the '70s, the type of rehabilitation that was acceptable has gone up immensely. The amount of effort that people are putting in to comply with their legislated requirements has been enormous. The mines I used to work at used to be kilometres ahead of themselves and now they're pretty much a void and a bit. They've caught up on their rehabilitation. I think the rehabilitation processes are appropriate, although if one could go back in time and do what you said, it would be a great thing to do, but you can't. So you need to look at it going forward.

The Hon. WES FANG: Mr Kelly, you ruined my long lead in because you basically touched on where I was going with this, which is the idea that solar farms and wind farms that are being developed now should have a levy placed on them at the start, prior to construction, because ultimately in 20, 30 or 40 years, when the farm either needs regeneration, because the solar panels have stopped working, or is no longer needed, the cost to the landholder to dispose of and redevelop that land back into either primary agricultural land or something else is going to be astronomical. Who's going to bear the brunt of that? In relation to your testimony that the levy would have been a good idea at the time, do you think we should be looking at, for example, solar farms and wind farms as being similar to mines now and that they should have a levy placed on them?

GRAHAME KELLY: I think the way you'd measure it is based on where you want to get to at the end. The challenge today is simply the technology. If I'm a coalminer and I'm going to start today, I need to have a plan about how I'm going to impact the land before I use it. I'm going to need to have a look at what I'm going to do with the land while operating, and I need to have a plan for when I'm finished. My view on big economic ventures, that should be the same for all of them. There should be a plan on why it's a good place to do it, what they're going to do during the life and how they're going to finish it up at the end. During the life cycle there has to be the recycling of the material because of course you're not going to do it all the time.

Who ultimately bears the economic burden? I think that's probably a debate for the person who's either leasing the land and putting it up and what their contractual obligations should be at the end—and if they're not done inappropriately then it's not unreasonable for government to levy in those cases. But, again, there's an economic debate here about whether or not you want to encourage renewables and if so, who's bearing the cost of that at the other end versus alternatively who's getting the economic outcome? My union would certainly support public ownership of wind farms and solar farms to solve that problem that you raise.

The Hon. WES FANG: I guess my last point on that is any approval processes for solar farms and wind farms, do you think there should be a regenerative plan at the start of the approval process so that we understand and know when it comes to end of life how we're going to remediate that site?

GRAHAME KELLY: I think it should, but put that in context with mining. I heard the back end of Mr Rush's point. One of the reasons, for example, you leave a void at the end of a coalmine, it has nothing to do with anything to do with what you really want to do; it's because you're going to extend the mine. If you're going to extend the mine, you need somewhere to put the dirt, and it's closer to where you're going to go. That's ultimately why you do it. It should be the same with renewables in some respects in that they should be thinking about what the future land use is and doing that accordingly. It depends. There could be particular sites that are going to be renewable energy hubs forever, and that's okay. We should know that and we should plan for it.

The CHAIR: Mr Kelly, thank you for making time to give evidence today. We heard from the previous witness also, Mr Rush, about some of the innovative investment that the Mining and Energy Union in particular is making for their workforce or for what they perceive as the reality for the workforce, and he gave an example of the Latrobe Valley. I just wondered if you could elucidate more on examples of what you're sort of doing at the moment with mining companies to deliver for the workers of your unions.

GRAHAME KELLY: It's fair to say that across the country it's different. For example, in the Latrobe Valley there have been lots of conversations with the employers there and the unions and the various authorities because the Latrobe Valley's in a pretty difficult situation. Not only is their mining industry, which is brown coal

¹ [Email from Ms Alison Goodwin, on behalf of Mr Grahame Kelly, General Secretary, Mining and Energy Union, providing clarification to evidence given at the public hearing on 5 August 2024](#)

and massive power stations, under threat but so is their timber industry and so are other things. We're more than happy to work with other industries that want to come to the region and benefit from it.

Our challenge in the Latrobe Valley is that they have this resource called brown coal, which is really bad for greenhouse gas emission. But if you do it for hydro, you can actually have a concentrated stream where you're getting in the high 90 per cent recovery rates, so you can do it in such a way that you actually create energy. The added advantage for the brown coal of Latrobe is that it's really wet. You have to imagine, this is coal that never really quite got there. If they use that coal, they actually have a water source as well. There are lots of benefits in the Latrobe. If you build those industries, our advice is that it's several thousand jobs in that region plus the port facility, so there are lots of benefits.

If we move to Collie in WA, I have spent a lot of time over there trying to convince people that at the end of the economic life cycle of things there can be a challenge with who pays and under what rules you're playing by, and the risk for the corporate world is you have to comply with the corps Act so you can't make the organisation go broke. But if we could put them into other vehicles like trusts and that, then you change the way in which you need to manage that infrastructure and you can potentially develop a process whereby the good outcomes you want to develop you've already built the pathway for them and then you encourage that to be generated. You can do that in a way where people can make an economic value to contribute at the start but give them opportunities to do some of the renewable work in the future.

If I look at the Hunter more specifically, there's a number of challenges there. Again, Mr Rush touched on briefly the connection to some mines and some power stations. That's true, but in the case of the Hunter a large number of the mines can actually export their coal. As a result of that, we expect mining to be around in the Hunter Valley—subject to planning approvals, I hasten to add. We expect them to be around in the Hunter for at least another 30 years unless we've taken a view of why sell the best coal with the least emissions to the rest of the world and let them use some inferior product? I can't understand why we'd do that. I would think our view would be our coal, which is all above 5,000 calorific value, we sell it to the world. It's low in sulphur. There's a win-win there because we also get the economic benefit.

The Hon. WES FANG: Or we just use it ourselves.

GRAHAME KELLY: I don't know if I'm allowed to answer that question but if I do—

The Hon. WES FANG: You are.

GRAHAME KELLY: —I would just make the point that we don't own the coal-fired power stations, except maybe in Queensland and one in WA. As far as I understand, the system we have in Australia is that the owners of the property are allowed to do with it as they wish. It wouldn't be our first call to say, "Do this." But, equally so, we're also creating machines that were built to operate in a certain way; the market is now making them operate in different ways so their life cycle is going to reduce. I appreciate the point. If someone came round tomorrow and said, "We're going to build a new coal-fired power station," we'd certainly support it, but it's all relative to what that technology would be.

The Hon. WES FANG: I'm liking you more and more, Mr Kelly.

GRAHAME KELLY: A lot of people do, surprisingly.

The CHAIR: Mr Kelly, you mentioned the example of Collie and the work that you're doing over there to look at the creation of a trust. There have been a couple of submissions that have mentioned the risk and the liabilities and, subject to any changes, who would be saddled with that risk or liability. Is that something that you envisage a trust would be able to take on, if you were looking at changing the current mine use or current land use, for example?

GRAHAME KELLY: Ultimately, that's a critical aspect, I would imagine, in any decision to have a trust, and that is what powers does that trust have to be able to get an economic value beyond the life of whatever the industry is at the time. I should hasten to say, in the WA example, I was totally unsuccessful and the Government decided to spend \$265 million to prop up the Collie mine, which will get them through until 2026—mid-year probably—which is a good outcome because ultimately the local community still benefits and they've got future plans.

The advantage of a trust is simply that it's old law and because it's old law it means it dominates. As I understand it, you can set up the mechanisms you want out of the trust. For example, the one that we developed for the Collie example, it would have run the power station, it would have run the coalmine, and it would have started the process. They are very fortunate; they've got a void that makes water so they've got a really big facility where they could do pumped hydro. That's the secret; if you've got a void that makes water, then it's a lot better than what Mr Rush was explaining with ours in the Hunter where the evaporation is faster than the rainfall. That's

a good thing unless, of course, you cap it. You could do all those sorts of things. You also have the ability, because land, as you know—even in the Hunter, or in New South Wales, has large areas of land that's zoned not to be used while there's mining going on but things like solar farms and wind farms and those things would work on them, plus other facilities.

One of the things that we like to stress in our submissions is there's a lot of really good infrastructure in the Hunter, Wollongong, Illawarra, and Lithgow and the like. There's these big facilities which can be used for stuff. They're generally close to powerlines, really high-level powerlines. They're really close to rail and they're really good to road transport, so there's lot of opportunities if those things are coordinated. Again, Mr Rush made the point about site by site, and I think there's merit in that. If you can do that, then there's all these benefits for those areas, which, again, if it's owned by a trust, then the trust can keep control of it. Trusts won't be free, I suppose, is the point. You do have to make sure you can generate enough money out of them to make them work, whether that be government assistance or corporate assistance.

The CHAIR: What are the opportunities that you see for your members in this mining transformation, as I like to call it?

GRAHAME KELLY: I see a lot of them working in the coal industry for a long time. I'd like to be in Queensland, in the Bowen Basin, doing metallurgical coal, because I'm pretty sure that's going to be going for a long time to go, so I think that's important. In the Hunter, again, there's lots of thermal export and semi-soft. Just to give you an example, the advantage of semi-soft is you can use it with hard metallurgical coal to make steel. You can blend it so you can get better outcomes. I think a lot of our people will be doing that.

I would like to think that the rehabilitation and the idea of levies and things like that can help us engage our members who have all the skills in that area to be able to rehabilitate the land, where it's deemed appropriate, and bring it up to a standard or a use that can be of value. We'd like to see other industries come to our communities, whether it be steel, or pumped hydro, or hydrogen production, or whatever. We think there are a lot of opportunities. The Hunter has a lot of land that's been dedicated to mining. The problem there is a lot of our companies use a loophole, if I can use the term, where they keep them on care and maintenance for a lot longer than they should. While they're doing that, that becomes a problem in getting a final resolution for that use of land. Again, we'd encourage a change there, to allow our members to work in helping rehabilitate and helping work in those areas or provide new industries.

The Hon. MARK BUTTIGIEG: I have a relevant follow-up question, Mr Kelly. A previous witness, Mr Ayoub, raised the German example of what worked fairly well over there. You mentioned before in your evidence about this not necessarily being a one for one. To be frank, if I'm a coalminer, 40, 45, 50 years old and I'm earning 150 grand, 200 grand a year, I'm unlikely to have much faith in just transition, because the reality is I'm not going to get a job that pays that well.

The Hon. WES FANG: Definitely not under you blokes.

The Hon. MARK BUTTIGIEG: What's your view of how something like what they used overseas would work, and to what extent did it work in that context?

GRAHAME KELLY: In the German model it was a roaring success, I think is the best description. I appreciate that some people argue that they had to turn it back on because of the Ukraine war and so that proved it was a failure, but I don't agree with that. My view is that the German model worked well because it involved all parties. It involved the people who owned the assets, which in the case of the Germans was predominantly the Germans; it involved the unions—they have a different sort of union-employer relationship than we do, but not dissimilar; and it also involved the communities. What they did was set out a long-term plan. If I'm to be believed in anything, I'd like to suggest that my suggestion to you about how long thermal coal can last and how long metallurgical coal can last is correct, and if you do that we're in line with the German model. We're at that perfect point in time where we can say, "Let's work out the plan to transition these workers."

Our union supports the view that we should have power stations operating while ever they're economically viable to operate and we need them to keep the grid working. We're also equally supportive of the view that we should sell coal to the world while ever the world needs it. Everyone has to make their own decisions about how they meet their emissions. It's not something that we in Australia should all of a sudden think that we're the best in the world at and tell everyone how to do it. We should do our stuff properly and we should do it really

well. That should involve a German-type plan for the metallurgical ²mining industry in Australia, as well as the thermal industry in Australia—those that export. There is plenty of opportunity.

The Hon. MARK BUTTIGIEG: Are you across the economics of how that model worked?

GRAHAME KELLY: Only at a really high level. The reality was they basically made a commitment to everyone, and then honoured it, that they were going to look after you. They then turned around and looked at the industries that they could build, based on the economic benefit of that region. A lot of it was chemicals. A lot of it was manufacturing and those sorts of things, all of which have been addressed by the current Federal Government. The New South Wales State Government is considering those things, which I think is commendable.

The Hon. MARK BUTTIGIEG: What do you say to The Greens' view of the world, which I'm assuming would be, "We haven't got enough time to stuff around because of the climate emergency. If you plan for the next 20 to 30 years, we have to just shut down all the coalmines, otherwise we're not going to make it"?

Ms SUE HIGGINSON: Chair, can I ask the member to include the fact that it's the Climate Council and all of the other independent organisations who talk about the need to transition from coal?

Ms ABIGAIL BOYD: They're all the same; it's not The Greens.

The Hon. MARK BUTTIGIEG: Okay. Let me rephrase it: The Greens are at the vanguard of that argument and there are other organisations backing it in. What do you say to that proposition?

GRAHAME KELLY: My view is simple. We signed an agreement in Paris, as a country, that said we were going to work towards limits and to get emissions below 1.5 degrees. If the science is correct, which I believe it is, then the reality is we should try to achieve that target. We should try to achieve that target for us in Australia. We shouldn't burden ourselves, in my view, with how others are going to hit their targets because, at the end of the day, using cleaner—albeit still coal—coal from Australia to produce energy in developing countries will allow them to transition faster.

The challenge for Australia will always be at places like China and India, where we do provide a large amount of resources to have industries that are much larger than ours. As a result they could easily just say, "We don't need Australian coal," and turn it off. There's not a lot we can do about that if that happens. But to simply close our industry down just because at the moment we think it's—well, there's no doubt it's good for the planet, but the point being that it has got to be good for us as well. Others should have to hit their targets because, if we can produce it and we get enough foreign exchange to allow us to do other things—which really matters, in my view.

The Hon. WES FANG: I'm going to test our friendship, Mr Kelly.

GRAHAME KELLY: Well, given I've never met you, I think that's fair enough. We should be okay.

The Hon. WES FANG: We'll see. Does your union have a position on the deployment of nuclear power to provide cheap, reliable base load power to the people of New South Wales and, indeed, Australia?

GRAHAME KELLY: We do have a position on nuclear. Our view is the same as with coal-fired power. If someone was going to build one, we'd certainly want to organise it and have our members there. You made a couple of comments on that that probably I wouldn't agree with. One is cheap. Let me give you the perfect example for cheap. Let's assume we can do nuclear power in Australia. Think about all the continent,³ as to where you'd put it. I would think the most economically viable and the most sustainable place on the planet would be the Pilbara in Western Australia. There are literally hundreds of billions of dollars of profit made out of that area. It's a huge area, I appreciate. You could put one of your nuclear reactors up there and it could generate power for all that community and all those industries that are there. They could sell the products to the rest of the world and it would be cheap. But, of course, you don't hear the mining companies running around saying, "Yeah, let's do that. " These are my views. They don't do it because it's too expensive, it takes too long to build and you've got to pay for it for a thousand years, and that's the challenge.

Ms SUE HIGGINSON: Is the union aware of industry advocacy for vertical mine shafts as energy storage through the hanging of large weights?

GRAHAME KELLY: Yes, I'm aware of it.

² [Email from Ms Alison Goodwin, on behalf of Mr Grahame Kelly, General Secretary, Mining and Energy Union, providing clarification to evidence given at the public hearing on 5 August 2024](#)

³ Ibid.

Ms SUE HIGGINSON: Has the union considered what sort of risks are around that? Are you looking at that as something that should be explored?

GRAHAME KELLY: Given that we wouldn't have a single member in it at the moment, no, we haven't spent a lot of time on it. At a really high level I think the points I'd make to you are: Does it seem sensible that you can suspend a large load and allow it to go down and generate electricity—it seems like quite a novel way to solve a problem. There would be challenges, the same as there would be challenges if you wanted to put pumped hydro into an underground coalmine. It used to be a swamp. You're creating a void. What is going to happen? But there are really, really clever people in the country who are engineers and the like that I'm sure will work out the best way to do that. I don't even know what height they'd need to be to make them generate enough energy. I don't know.

Ms SUE HIGGINSON: Is there a concern from a worker safety perspective with industry—

GRAHAME KELLY: I'm relatively confident they're not going to put them in shafts that have been used at the moment.

Ms SUE HIGGINSON: No, I realise that. We would hope not, seriously, which actually leads to my next question. Does it concern you if it is industry driving this kind of innovation without firm partnership with unions talking about worker safety first?

GRAHAME KELLY: If you're talking about voids in the coal industry, we will absolutely play a role. I think it's not next year—the year after will be 150 years we've had check inspectors in coalmines in Australia, which is an internal audit process of that system. Safety is the absolute number one thing we do. If there's a chance that it's going to affect people and we have an opportunity to play a role, then we will. Are we at that point yet? I don't know enough about it to know if that's the case or not. But we would definitely play a role if it's in our industries. We do have alliances with the Australian Workers' Union in a number of non-coal sectors. Again, if it's the sort of thing that needs to be or is possible to be done, then we would be more than happy to play a role.

I'd only make one other comment on your point. You talk about innovation, and a lot of innovation in Australia definitely comes from the corporate sector. I'd also support the role that government should play in these sort of innovative solutions because I think there's a lot there. Government agencies like the CSIRO and others—I think we're well served if we do that well. We have a global superannuation or pension system that's the envy of the world, in lots of cases, for a country of our size. We should tap into that as well to generate the opportunities to get a return.

Ms SUE HIGGINSON: There are threshold questions, though, isn't there, about land capacity and safety as we move forward?

GRAHAME KELLY: Again, to your point about lowering a load into a void. A void that's probably been there for a long time already and is, I suspect, not showing any signs of weakness or fatigue is probably not a problem. If it's something that's crumbling and falling apart, that's a different question. But, again, if the only loss is that the—call it a rock, is stuck at the bottom of the ground and there's no-one there, then it's not the end of the world. The person who built it—it's their problem.

Ms SUE HIGGINSON: Finally, are you aware of other speculative technologies that are being considered other than pumped hydro, wind and solar?

GRAHAME KELLY: I've been blessed in some respects. I came to the national office of the union in 2017 and I got to talk to a gentleman by the name of Peter Collie⁴. Peter is one of these people who has been going to the various energy forums around the world about climate change since the late '80s, early '90s. We're one of the unions who thought a long time ago that this might be a big thing, and we kept attending. Peter used to tell me about all the various bits of technology. So I'm aware of hundreds of different points of technology but what's going to apply and what's going to be used, it's not for me to say. To be honest, I have more pressing things to do with my time than worry about that.

Ms SUE HIGGINSON: Sorry, really finally. I just want to pick up on your point about we should just keep mining coal and exporting it.

GRAHAME KELLY: While the world wants it.

⁴ [Email from Ms Alison Goodwin, on behalf of Mr Grahame Kelly, General Secretary, Mining and Energy Union, providing clarification to evidence given at the public hearing on 5 August 2024^f](#)

Ms SUE HIGGINSON: Does that concern you, though? Is your view that we should keep mining but be very prepared for when the market says they don't want our coal anymore?

GRAHAME KELLY: Yes.

Ms SUE HIGGINSON: Because it seems a bit reckless to not be taking the lead in terms of the shutdown and the stopping in that. Where is the sweet spot for workers and in terms of their jobs going forward?

GRAHAME KELLY: There has to be an authority that has oversight of this, in my view. The Federal system is not specifically aimed at this yet but I think over time it will. The reality is that you do have to work that out. I don't think it's reckless to continue to mine coal. A good example is Indonesia went from nowhere to being the world's largest seaborne seller of coal. The reason they did that was—what the power stations around the world worked out was that if they burnt two tonnes of Indonesian coal with one tonne of Australian coal, they could get pretty much the same energy. The outcome of that was they got more emissions.

The reverse is true, and this is what's been happening for a while. The Indonesian amount of coal is reducing on the seaborne market but, equally so, they're also using more internally. Australia—they're using our coal more. They're using two or three tonnes of ours for that same production, and they're getting more energy with less emissions, which is a good outcome for the world if one was to look at the world as a singular place. So I don't think it's reckless at all. I think there's a lot of reasons to support coalmining going forward, but there's got to be a plan.

My answer to Mr Buttigieg was, I believe, correct, and that is we've got the perfect time to start to develop that plan so that no coalminer anywhere in the country ever has to face the concern about "What's my future?" There should be a plan. The plan should involve rehabilitation. The plan should involve re-using fly ash. The plan should involve using the facilities to put other economic value-adding industries on them. We should do all those things. The upside for us is that the sooner you do, it puts our wages in competition in the region. I could probably get more money for my members.

Ms SUE HIGGINSON: Just on that, though, in terms of the export market, are you saying that you don't see that we have a responsibility in the global effort to reduce greenhouse gas emissions to say, as the supplier in the market chain, that we're going to end by a particular date to encourage the purchasers of our coal? You don't see that we play an important role in that?

GRAHAME KELLY: One could argue you play a role. Is it an important role? Is it the one that's going to decide whether or not a country keeps using our energy? Our decision so far in Victoria is that they're not supportive of the hydrogen example that I gave before. The reason for it is because it's blue hydrogen; it's not green hydrogen. The Japanese take a view that any improvement is a good improvement and you've got to retool economies to make sure they work. It is the same here. The fact that we can send our coal and, as a result, global net emissions reduce is a good thing. The fact that we're selling our coal to the rest of the world and our companies—like the BHPs of the world and the Glencores of the world—are out there actively trying to work out ways to reduce emissions at both their end as well as where they're selling them is a good thing. At the end of the day, should we stop and say that we shouldn't do it all? I do not agree, because I think there's a lot to go under. Scope 3 emissions are not the problem of Australia; they're the problem of the country in which they're achieved. I appreciate that cumulatively there is an issue, but, again, that's the Paris Agreement.

Ms SUE HIGGINSON: But they clearly are.

GRAHAME KELLY: Imagine how many Middle East countries you'd have signed up to the Paris Agreement if all of a sudden we said, "You can't produce oil and, as a result, your economies are dead." No-one would have signed up. We would have never got anywhere. Global politics is a progression. Let's hope we can live up to the mantra that we've been given and achieve an outcome. To be brutally frank, with the support of both sides of the fringe, I think we'll get a good outcome.

The CHAIR: Mr Kelly, you mentioned earlier the facilities that some of this mining infrastructure have. I wondered if you could elaborate more on that for the Committee in terms of the possibilities and the opportunities. What are those facilities?

GRAHAME KELLY: It depends, again, where you go. I think Mr Rush talked a little bit about Liddell Power Station and some of the re-use for that site. I'll leave his comments there. If I just pick on the mine that I used to work at, which is now called Mount Thorley Warkworth, Mount Thorley Warkworth has some massive workshop facilities and that—where I started as a TA, I must add. The reality is that those facilities are world class. They have got all the infrastructure you need to be able to use them as a manufacturing area. You've got the power nearby, literally within 100 metres of these facilities. To me, it seems like a waste if we simply said, "Let's tear them all down and see what happens in the future."

That doesn't mean I think you should do things like—if I pick on the Latrobe Valley and I look at Hazelwood Power Station, there's a rehabilitation amount of work there that has to happen because the reality is that that power station is full of asbestos and a whole lot of things, which might mean you want to demolish and fix it up. Our facilities, we should purpose build them for the industries that can operate in those regions. As I said, these workshops are enormous. There are plenty of things you could do—maybe even some of these lowering the rocks. Again, I don't know the height, but maybe it works.

The CHAIR: In your submission—and you did touch on it in comments you made earlier—you mentioned mine operators not being free to place mines on indefinite care and maintenance as a tactic to avoid closure and rehabilitation. I wondered if the MEU had any examples of mines currently like that and whether you had any indication of the scale of that potential problem and how to deal with it.

GRAHAME KELLY: Off the cuff, I probably don't. We're probably better off taking that on notice and answering that correctly. There's always a risk. The challenge with what we could perceive as "indefinite care and maintenance" can be that it's not really indefinite. For example, the Dartbrook Mine, between Aberdeen and Scone, closed in 2006 or 2005—somewhere around then. It's in the process now of reopening as an underground coalmine again.

The CHAIR: Yes. I believe the Minister was there yesterday.

GRAHAME KELLY: We would have said a long time ago that was indefinite. There's a balance for how you do that. Some of the mines—for example, in and around the back of Newcastle, the old undergrounds—I'm sure some of those are still on care and maintenance. I'll take it on notice to give you the right answer.

The Hon. MARK BUTTIGIEG: Mr Kelly, on this timeline thing, let's be frank—on the left, we're getting pressure to say, "Hurry up. We haven't got enough time", and your more pragmatic approach is, "We've got to have a plan. We've got enough time. It's high-quality coal we're exporting. We can do this and contribute to our targets as opposed to try to solve the world's problems, meeting their targets." What's your view, your members and the broader community at large, on the buy-in to the renewables transition if we were to go too hard and start shutting the joint down? I'm just wondering what your sense is of the politics out there in the broader community.

GRAHAME KELLY: I think there's always a challenge. People are earning good money and would like to keep earning good money into the future. If they think their jobs are in jeopardy, then their support for any approach is challenged. Of course, we've had climate wars, if we call them that, for a good decade now. The reality is we all know what it does. You end up with a situation where no-one gets anything done. We'd be supportive of doing something. The question is how best to do that, and we'd like to be involved because it is our members that are at the coalface, literally. We'd like to be involved in any of that sort of development and discussion because we think there is a way to do this. I'd like to think that governments of all persuasions, or parties of all persuasions, would agree that getting a good outcome for their constituents and the public in general would be something we'd all want to do. I'd like to think my kids have got a future in the future as well.

The Hon. WES FANG: In the previous term of Parliament, we had an inquiry into uranium mining in New South Wales. You can obviously look for it, but if you do find it, you can't extract it because there's a prohibition on it. Obviously, with nuclear being such a cheap, reliable and clean source of energy, would you and your members advocate for the removal of the ban on extracting uranium in New South Wales?

GRAHAME KELLY: I think the extraction of uranium or not is a matter for the parliaments of the nation to decide. That would be my first answer. The other part of it is, again, you rely on cheap and all that sort of stuff. If you remember my analogy, the Pilbara, the number one reason that I think the mining companies won't put a nuclear reactor up there is you've got to pay for it for thousands of years, and I think that's the issue. When you do the economics properly, you have a problem in that it doesn't add up, albeit a position is being run at the moment—and I'm sure will be run in places where my members live up in central Queensland and the Hunter and others—that it will be the push that this is the saviour of all things. I don't agree with that because by the time we take to build them and do that our people in the power station industry will have transitioned. Our mining people should continue to be mining coal if our say has anything, and the outcome will be it has been a distraction and it's not the outcome we need if we're going to work together to solve to problem, because it's not always

The Hon. WES FANG: If I was paraphrasing your answer, would I say, "Maybe"?

GRAHAME KELLY: I wouldn't paraphrase my answer.

The CHAIR: That's all we have time for this session.

GRAHAME KELLY: It has been a pleasure. Thank you.

The CHAIR: Thank you so much for making time to give evidence, Mr Kelly. Our secretariat will be in touch about questions on notice.

GRAHAME KELLY: Sorry, Chair. I should have apologised, too, for Bobby Timbs and Robin Williams, who literally couldn't be here because of the timing. They were keen to come, and they volunteered me.

(The witness withdrew.)

(Luncheon adjournment)

Ms DONNA AUSLING, Director, Narrabri Shire Council, before the Committee via videoconference, affirmed and examined

Mr GARY MURPHY, General Manager, Liverpool Plains Shire Council, before the Committee via videoconference, sworn and examined

Councillor DOUG HAWKINS, Mayor, Liverpool Plains Shire Council, before the Committee via videoconference, affirmed and examined

The CHAIR: Welcome, and thank you for making time to give evidence to the inquiry today. Would you like to start by making an opening statement?

DONNA AUSLING: Narrabri Shire Council welcomes the current inquiry into beneficial and productive post-mining land uses. As detailed in council's submission, the mining industry sector supports nearly 7,000 jobs with an annual economic output of \$5.671 billion. The mining industry sector makes the greatest contribution to economic output in our region which, at \$3.5 billion, accounts for 62 per cent of total output. The industry sector is also the largest employer, with 1,500 jobs representing over a fifth of total employment within our region. A total of five coalmines are currently operating within our shire, with several also at closure stage.

Narrabri shire has benefited from a diverse economic base. However, a considerable challenge for our community is that, once a mine reaches the end of its life, it typically issues the lower order uses that do not generate significant employment numbers. These traditionally include extensive agricultural activities and rehabilitated land for biodiversity and environmental purposes. There is extensive literature demonstrating that regions with greater economic diversity have improved resilience and ability to adapt to structural change. Council sees great opportunities for the use of innovative approaches to mine closure and opportunities for the mining industry to leave positive legacies.

Reconceptualising mine closure and associated mining legacies is considered an essential operational shift that both industry and government will need to make in order to keep pace with community expectations and to take advantage of economic development opportunities. Narrabri shire seeks a greater financial commitment to the post-mining transition from royalties that have largely bypassed host communities and would welcome the preparation of transition plans to assist in navigating this complex process. Thank you for the opportunity to provide feedback.

The CHAIR: Does Liverpool Plains also have an opening statement?

GARY MURPHY: No, Madam Chair.

The CHAIR: We'll move to questions.

Ms ABIGAIL BOYD: Good afternoon to you, and thank you so much for coming and giving us the benefit of your experience. The first question I'd like to start with is in relation to training opportunities. What we've heard from previous witnesses and communities across New South Wales is that there's a real lack of not just the opportunities for further training to upskill and reskill but also a lack of recognition of the current skill levels of workers. Has any work been done in your particular council areas in relation to mapping out what the skills of workers are and what they will need in terms of training in order to prepare for other jobs outside of the coal industry?

DONNA AUSLING: Narrabri Shire Council has prepared a regional workforce strategy that does provide us with some data information around skills shortages and needs. I'm happy to share that with the inquiry Committee members, if it would be of benefit. Our experience has been similar on a local level, where there is some shortages and gaps in training provider offerings, and also the challenge that I think exists, where we're moving to a future of renewables. For some industries we don't even know what they might look like and how they might shape our regions as yet. There is some additional research and analysis needed in that space.

Ms ABIGAIL BOYD: Liverpool Plains, have you done a similar exercise?

DOUG HAWKINS: Yes, we've only got a very small footprint there. It's only a very small mine. But we have looked at transitioning—it's already well underway. I believe there's a firm that produces chickens that's already speaking with Whitehaven. What we're looking to do is—the jobs that we'll lose from the mine, we're not going to lose all that many because there is only one mine and it is only a small operation. The jobs that we lose from the mine we can absorb, but we can't replace the rates. The rates that we get from the mine is upwards of half a million dollars. If that's allowed to go back to grazing land—and it's not very good grazing land at that—or the whole area of the infrastructure is taken up by the chicken farm, we will end up with rates of \$6,000 or \$7,000 a year instead of half a million. That's got to be spread right across our entire shire, which is 5,000 or 6,000 square

kilometres. But we only have a rate base of about 4,000—we have 8,000 people in the shire but our rate base is around the 4,000 mark. It's going to leave a considerable gap if we can't utilise or find a way to utilise that infrastructure.

We believe that that infrastructure is ideally placed as a transport distribution hub, because the bulk of the infrastructure is already there with the rail line. It's unique inasmuch as transport operations from that site have access to all the major ports without the locomotives turning around—and I mean Gladstone, Brisbane, Newcastle, Sydney, Melbourne and the like. We already have a transport operator on the site that is already transporting containerised grain, which is the bulk of our income, and timber. What we're looking to do is to try and get the investment in that site for storage areas, to terminate heavy road users there and then transport the freight by rail. B-doubles, B-triples and road trains wouldn't have to go any closer than Werris Creek and the freight would be railed from Werris Creek to the major ports.

We can absorb jobs that we lose from the mines, which will only be around about a dozen jobs in total, but it's the rates that will be the major concern. What we're looking to do is to try and have more industries on that site rather than the whole site being taken up by a chicken operation that is going to produce chickens as a feeder operation to Baiada and the like in Tamworth. We're not going to get a lot of jobs out of that. The estimation is that there will probably be seven jobs in total that come with the chicken farms. But also there's 600 megalitres of usable water that's in the mine. Out of that 600 megalitres, the chicken farm is saying that they want 400 megalitres of that, which doesn't leave a lot of water available to other industries. We believe that we need another at least two or three major operators in there. As I said, we need to sell it to bigger players that can have distribution operations there—storage and warehousing—and be able to freight all over the country region.

The CHAIR: At the outset, I thank you both for making quite substantive submissions that were really informative and instrumental for the Committee. As regional councils, I know that would have been a lot of work. I want to commend you both and thank you for the work that has gone into both the submissions. In terms of Narrabri—and I will also invite Liverpool Plains to comment, if you can—at point (i) in your submission you talk about the need to re-skill and retrain the current workforce. How can training providers, including the current community universities model, better tap into the local community and the market that exists there?

DONNA AUSLING: Thanks, Madam Chair. I believe the key is really around market engagement and developing a dialogue with those between the operators and the providers. There do seem to be some gaps we've alluded to in our submission around the current TAFE offerings. I also consider that the training providers are suffering some skills challenges. Attracting and retaining staff has presented some issues. The Country Universities Centre model has been working exceptionally well to create a bridge between regional areas and universities and tertiary education providers outside of our region. It's had a good, almost immediate impact of upskilling our local people.

The CHAIR: That's good feedback, thanks. Liverpool Plains?

DOUG HAWKINS: Yes, look, we have a connected learning centre. Our situation is a lot different to Narrabri. It's on a much smaller scale and a much smaller population. The connected learning centre that we have is doing its job with the amount of people that we put through. That's not our issue. Our issue is having jobs to attract more ratepayers to the region. More investment in housing is needed. We can't get that unless people have got jobs to come to. That's why we are looking towards the transport distribution up in Werris Creek, because it is labour intensive and it could attract anything up to another 150, 200 workers. Our main problem is attracting workers to the region in order to get that growth and in order to build our roads.

The CHAIR: In terms of Narrabri, I'm also interested to hear more about your strategic approach to housing and the Narrabri Place Strategy, which is commendable. How would that work with post-mining land use, and what benefit could that bring to the local communities?

DONNA AUSLING: Thanks, Madam Chair. One of the key challenges that Narrabri has had is that we're one of the most flood-affected communities in New South Wales. That has significantly constrained our growth and development for a whole range of reasons. Through the draft Narrabri Place Strategy, we've identified a growth corridor that will be fully serviced with a whole range of housing typologies, so we're hopeful that that will alleviate some of the pressures that we've had in that housing space. Interestingly, we have been also supportive of temporary accommodation. We have two Civeo facilities—one at Boggabri, one at Narrabri—which has alleviated some rental pressure on the local housing market. The other side of the coin is that we have had, perhaps, a lack of investment because of the other challenges that we've experienced. But, again, hopefully with the body of work that has been done around the strategic planning and leveraging of the former Narrabri Special Activation Precinct, which we're hopeful we will reinvestigate at a future stage, will provide some transformative opportunities for our shire.

The CHAIR: You mentioned also in your submission that the current New South Wales planning framework presents impediments to innovation. What sort of changes to the regulatory framework would both councils suggest in terms of maintaining and advancing best practices in post-mining land use?

DONNA AUSLING: I'm happy to answer that as well. At the moment the standard instrument LEP is quite a rigid framework and it really doesn't allow a great deal of colouring outside of the lines. It's very rigid; there is not a great deal of opportunity for completing planning initiatives that are outside of that quite rigid framework. But in saying that, any strategic planning opportunities need to be underpinned by good strategic planning work and be driven by a basis of evidence. So that would be my recommendation. If there are opportunities created in the future, that those regulatory amendments are driven by that evidence-based framework and strongly underpinned by good information.

GARY MURPHY: Further to what Ms Ausling has said, I think the real challenge that we see is the tension between the need for the post-mining rehabilitation and remediation and then the future use. Even in the New South Wales Government's own strategy it recognises that there is that lag. I think one of the case studies in Lithgow—activity stopped in 2014, and there is still discussion going on around what that future use might be. So I think that early identification of potential future use, building that into the rehabilitation plan. That is acknowledging that the highest and best use of that land may not necessarily be grazing or native vegetation, as important as that is. But I think more of a balance of social, environmental and economic activities, rather than just focusing on rehabilitating the land to what it was. I think that early recognition and planning together with the regulators, the proponents of that mining operation, and importantly the local community as well. Because I think the host community often is excluded from that, and it's really important that the community is engaged in that process.

Ms SUE HIGGINSON: I'd just like to hear your views and concerns around land capacity concerns that you might have, particularly in terms of final voids. I know in Narrabri you've got the big undergrounds as well as the open cuts and you've got all those varying life stages of these big—I know with Werris that is obviously an old, long project. Naturally, if we are going to be reclassifying or rezoning land we need to understand its capacities. Do you have concerns around the stability of some of these areas now? Is that something that you have the capacity as a local council to be looking at those issues and to be dealing with those issues?

DONNA AUSLING: Around final voids, the industry at the moment is highly regulated and restricted in terms of the management both during operations and post-closure. So I don't have, from a professional standpoint, major concerns around the integrity of the engineering from the voids and the rehabilitation and the final landform process. What is of interest is the need for infrastructure and legacy audits to try and establish what might be the other future land use opportunities. That really hasn't been done to a great effect in our region. There is also liaison with those mining operators to see what their plans are or what commercial opportunities they might have in the pipeline, as they adjust their business model away from mining and potentially to other investment opportunities such as renewables. So voids can be used. I've seen proposals in the Hunter Valley for hydro schemes, for example. There's a range of innovative opportunities for the use of those viable land forms.

Ms SUE HIGGINSON: In terms of some of the Narrabri projects—I think it's Whitehaven—I read somewhere that they're investing in some of their own renewable facilities to generate their plans. Does it concern you at all that there's no external use or connection of those renewable facilities? Is that something you think could be a benefit to your shire?

DONNA AUSLING: Yes. That certainly would be a greater benefit if those projects were to extend beyond the boundaries of the site and if they could consider some legacy opportunities for the community, whether it be co-generation or a community partnership project. There are great opportunities, potentially, in that space.

GARY MURPHY: I suppose the challenge in relation to that is, again, going back to the underlying theme of not really thinking forward in terms of future land use. One of the discussions that we've had with Whitehaven is, for example, as part of their rehabilitation, the restoration of the land form is not done in an engineered fashion that would support housing. It's designed to support biodiversity, which is great. But in terms of the integrated development of, say, housing or some other activity there, it's not possible because of the rehabilitation that they've done.

In terms of renewable energy, one of the other suggestions—and the mayor spoke about the chicken farm—was using some of the chicken litter and some of the waste material from a lot of the farming and agricultural operations, and maybe some sort of biogas activities that would take place there. But that would require substantial investment. The mining operator doesn't see that as their role to play. That's where you would need somebody else to come in and co-invest. I agree with what Ms Ausling was saying: It's really important that the local community gets some legacy infrastructure because they have tolerated this activity. Yes, there have

been some community benefits along the way, but the secondary or ongoing land use has to be something that the community has a say in and is accepting of.

Ms SUE HIGGINSON: I think it's fair to say that in both of your shires there was quite a lot of anxiety amongst the agricultural sectors and operators on both the Liverpool Plains and Narrabri, especially as some of those proposals started to get bigger or impacted. Of course, in Liverpool Plains you're still dealing with parts of the gas exploration as well.

The Hon. WES FANG: Thank you both very much for appearing today. I am curious to understand, from your perspectives, what you think of levies that might be able to be imposed on sites, either for mining in the future or, for example, to renewable energy projects such as solar farms or wind farms, in order to provide the government or local shire of the day the opportunity to rehabilitate that site post its use and when the power plant or mine reaches its end of life. Do you see that there might be some value in looking at a levy system when a solar farm or a wind farm is being proposed?

DOUG HAWKINS: Did you want me to answer that?

The Hon. WES FANG: In turn, I would love both of you to answer it, if you wouldn't mind.

DOUG HAWKINS: I don't see any benefit for us, unless we do have a legacy. We've already lost out. We only have the one mine. We are an agricultural region. We have some of the best agricultural land and some of the best grazing land in Australia, and I don't see paddocks and paddocks of solar farms making up the difference. All that will do is create more problems for the [inaudible] land and for the arable land that we have. We're known as the food bowl. We've advocated strongly to remain an agricultural region. As I said, I don't see the benefits flowing from the solar industry, the same as what we haven't seen the benefits of the mining industry.

Having said that, we only have the one mine. But we haven't seen the return of investment into our agricultural region that it has produced in royalties and taxes. Our roads are still second-rate. Our economy, with 4,000 ratepayers, is straining all the time. I don't see the benefit in that. I see a huge benefit in the infrastructure that's there, being the investment in a transport dispatch centre to create jobs which we badly need. Solar panels don't produce a lot of jobs once they're constructed and they use up productive agricultural land. I'm not saying there's not a place for them, but there's certainly not a place for them on the productive land we have because that's our, and is going to be our, sole income into the future.

The Hon. WES FANG: Before I move to you, Ms Ausling, would it be fair to say, Mr Hawkins, the loss of prime agricultural land when you have these renewable energy projects being enforced on your communities ultimately will provide less of a benefit than the continued productive use of that land in agricultural through a food or fibre sense, and that it's more likely that you would prefer to have that prime agricultural land in place than having, I guess, renewable energy projects forced on your shire?

DOUG HAWKINS: Absolutely. I think that the benefits of the agricultural land will be there long after and the benefits to the country, to the State will be there long after. We believe solar farms have an estimated life of 30 years, very similar to mines, and then you deal with the aftermath, like we're dealing with the aftermath of just one mine. I believe our grazing land and our water, our aquifers here, our water supply here and our arable ground here needs to be protected at all costs.

The Hon. WES FANG: Do you think, then, that a levy system against this reckless renewable rollout is probably not going to be enough of a support for the future when these solar factories—their life span is used up and we're left with fields of useless glass and metal?

DOUG HAWKINS: It's my belief that it won't, yes.

The Hon. WES FANG: Ms Ausling, can I ask your opinion on that question? Do you think that the rollout of these renewable energy projects throughout rural and regional New South Wales is perhaps ill thought out given there's no levy system in place in order to reconstitute the land back to prime agricultural land once those projects have reached their end of life? Do you think that we need to put a levy system in place before we continue the rollout of renewables? Would you prefer to have the prime agricultural land in place instead of fields of glass and spinning turbines?

DONNA AUSLING: That's actually a really interesting question. I'm seeing now, within communities, tensions between the renewable sector and the rural and agricultural communities, similar to back in the day when mining was first entering our region. There is a growing level of concern around the impact on prime agricultural land and the need to preserve that land, for a whole range of reasons. I think an issue that's overlooked, and a matter that we've just brought to the attention of the National General Assembly of the Australian Local Government Association, is the fact that we're facing a tsunami of renewable waste that our landfills are not

equipped to deal with. We are not able to accommodate that future waste and there's limited attention to research and development in that space.

On the question of levies for future rehabilitation, if that model was to involve councils actually doing that work, we're not equipped to deal with that type of activity, nor to take responsibility for rehabilitation. That's for a whole range of reasons. I wholeheartedly agree with Mayor Hawkins in terms of his observations that mining communities have not derived the full benefit of hosting mines. A lot of the benefits have bypassed our communities. We still have the road network in disrepair. Our assets are ageing. We're under incredible financial strain as organisations, and there's a current inquiry on that topic at both local and Federal levels. So, no, we're not equipped to deal with actually doing any sort of work in that space as rural, regional organisations that are struggling to attract and retain staff.

The Hon. WES FANG: My last question on that is, in that instance, given that both of you have provided fairly detailed answers in relation to issues related to renewable energy projects, do you think we should stop the rollout of these renewable energy projects until we've got in place a plan to manage the land, and the recycling and the waste that's produced by renewable energy projects post their end-of-life use? Should there be, as part of the approval process already in place, levies, funds and a plan in a way that we can then manage its end-of-life use?

DOUG HAWKINS: I believe so. I also believe that with the rollout of the renewable energy there should be more consultation with the local shire to find the suitable ground so that we can have an input. As to our agricultural ground, that we don't get flooded or we don't lose that agricultural ground or our income through that agriculture. There's probably ground that the solar rollout could be achieved with, but that knowledge is local knowledge and there needs to be a lot more consultation with the local council in order to find out the common ground for that. But I agree that there should be all of those things in place before we end up with massive solar panels all over the place and no structure.

The Hon. WES FANG: In relation to that point you've just made, do you feel that the Government isn't listening to the feedback from your shire and from the locals on the ground, that they're just ramming through these projects without actually taking into account the position of the local government and the members of the public that are having these projects forced upon them?

DOUG HAWKINS: If I may, an example, from the Liverpool Plains is that we have a proposal for a second solar farm in the Liverpool Plains that we've known about for approximately 14 days. It's plumb in the middle of prime agricultural grazing land. We have a mix of grazing land and growing land, but this proposed solar farm is smack in the middle of that, close to the township, and it comes on the heels of the first one that's been done in Werris Creek. The time that has been proposed to now is approximately two weeks. I don't believe there was enough consultation on this proposal to start with.

The Hon. WES FANG: That's absolutely outrageous, that you have been given only two weeks.

The CHAIR: We will pass to Ms Abigail Boyd now for questions.

The Hon. WES FANG: Sorry, I'm being shut down by the Labor Party on this.

Ms ABIGAIL BOYD: I want to unpick some of the answers to Mr Fang's questions. What I'm hearing from communities around New South Wales is a real frustration with there being a lack of a plan. I think it's fair to say that there was no real plan when it came to rolling out coal and coalmines to begin with, and we've ended up in a situation where we are trying to play catch-up and no-one wants to see that happen with renewables. If we are to set up these transitional jobs, future jobs, authorities, as is being proposed, how quickly do you need that and what do you think it would take to bring the community on board and turn things around, so that we do have that sort of plan?

DONNA AUSLING: Madam Chair, if I can answer that—supportive of an authority that's driving and overseeing this process, as long as it's not another level of bureaucracy that we have to butt heads with, as has happened in the past. If that transitional work is going to start, it needed to start yesterday. These projects, these initiatives, have a really long lead time. It takes time to build trust with communities, particularly Aboriginal and First Nations communities. That can't be rushed and needs to be done in a thoughtful, insightful and engaging manner. There needs to be a very, very strong community engagement framework built around it. Unfortunately, I have seen very few occasions, as a local government practitioner that's been in the game for over 30 years. It's not often done well. It really needs to be established up-front, to clearly manage expectation and actually deliver on what's promised.

GARY MURPHY: In relation to renewable energy zones, I'll refer to previous experience with Central-West Orana, which was one of the first. In principle, it sounded great—partnering with the private sector

and candidate foundational generators to deliver renewable energy for the State. I think it's an issue that happens all the time, unfortunately, with State significant development that the infrastructure development itself—whether it's a pipeline, whether it's renewable energy, whether it's a mine—is considered in isolation. It cannot be considered in isolation. There are community impacts to this.

To give you a brief example, in the Central-West Orana, something like 4,000 employees were flooded to that area to develop the renewable energy projects, let alone the transmission network that's required there. There was very little consideration given to where those technical workers would be housed, the impact on those host communities, who are already under terrible housing stress—there was no coordination of that. EnergyCo was set up rather belatedly as there was some running to catch up. As Ms Ausling said, it's all a little too late, unfortunately. There are also the social impacts of the impact on schools, the impacts on child care, the impacts on volunteer associations like the SES, the rural fire brigade, even some of the medical areas.

Another silly example—the required drug and alcohol testing for the workforce. There isn't the local doctors and nurses who can carry that out, let alone the impacts of any workplace—heaven forbid—accidents that may occur as a result of that. I think the lesson overall—whether it's mining, whether it's renewable energy, whether it's any State significant infrastructure, particularly on host communities that are isolated, that are rural—is not just the consultation process that Ms Ausling spoke about but also the overall planning of the social, environmental and economic impacts, rather than just simply looking at it as a wind turbine or a solar farm or what have you. It cannot be looked at in isolation; it needs to be a holistic strategic process and it takes time.

Ms ABIGAIL BOYD: I'm really glad you mentioned the housing issue as well because I think, again, going around to different areas where renewable energy zones are in place or being proposed, there are these common themes that, really, the success of the project depends on what they've been able to negotiate with the proponent of the project when it comes to that influx of workers that come all of a sudden for the construction—they need houses; they need services—and then the impact that has when the construction workforce leaves and just leaves the maintenance workforce. And then those issues around, if you've got a proponent who has got 40 years, say, on their solar farm, what happens at the end of that? Have we stood up the industry yet for recycling those things? There are all of these questions. Rather than leaving it to each council to negotiate, what would you be looking to the State Government to do to try to shepherd that process so that we do have more of a plan and an idea of what's happening?

GARY MURPHY: I think, just following up from that, that the State Government really needs to show some leadership there. I think EnergyCo was a good idea. I think there was some tension initially because it was both the proponent of the transmission line as well as the organising authority, but I agree with you that allowing each council—and this was something that the Orana councils quickly recognised, was the ability of them being picked off, as it were, by proponents as to what community benefits scheme that various proponents could get away with.

In the same question the member asked about levies—of what that community benefit scheme might look like. I think they've agreed on something at the moment. But it would have been far better if that had been established right at the outset to say, "Look, as part of this renewable energy zone, the community benefit scheme would be—and this is the formula, how it's worked out", so there was no argy-bargy between some councils who were first cab off the rank feeling pressured or bullied by proponents that they needed to accept this, that it was going to be good for their community and then later regretting what they may have signed up to. I think there really does need to be some leadership in that regard and, I guess, from the proponent's perspective, that they feel that they're treated fairly as well and it's a level playing field for them that there is a recognised [inaudible] formula for working them out.

DONNA AUSLING: Madam Chair, if I can just add to that as well, I completely agree with Mr Murphy. One of the significant challenges that we've had is that the benefit-sharing guidelines have not been finalised, so that has resulted in organisations being pitted off against one another and wanting to know what each other's got to make sure that we aren't being short-changed. There is a real lack of trust around that process. That really needs to be urgently addressed and, as we sort of indicated before, should have been set up quite some time ago.

Ms ABIGAIL BOYD: I agree.

The CHAIR: That's all we have time for in this session. Thank you again to the witnesses for making time to give evidence to the inquiry. Our Committee's secretariat will be in touch with you with regard to any questions that were taken on notice.

(The witnesses withdrew.)

(Short adjournment)

Ms JACQUELINE MILLS, Senior Climate and Energy Campaigner, Nature Conservation Council of NSW, affirmed and examined

Mr JADEN HARRIS, Advocacy Manager, Nature Conservation Council of NSW, affirmed and examined

The CHAIR: Welcome to our next inquiry participants. Thank you so much for making time to give evidence to the inquiry today. Would either of you like to start by making an opening statement?

JACQUELINE MILLS: Thank you for the opportunity to appear before the Committee today. The Nature Conservation Council of NSW is the peak group for the environment movement in New South Wales. We represent over 200 member groups. These are local conservation groups across our State who are concerned with protecting nature and addressing climate change. New South Wales faces a significant economic transformation as the world transitions to net zero and demand for coal exports decline. We are concerned the Government is underestimating the pace of this transformation. Any reforms to post-mining land use to facilitate new clean energy developments must enhance environmental outcomes. It's important that post-mining land use should not be seen as an easy fix for mine operators to minimise rehabilitation obligations.

The Nature Conservation Council is concerned by any proposal which would weaken rehabilitation and compliance measures, leave an unfair burden on communities, or result in poor environmental outcomes. In addition to other industries, the economic and employment benefits that landscape restoration provides must not be overlooked. The scale of this land use change that we're contemplating is a generational opportunity to enhance biodiversity outcomes in what is a key ecological region for the State, particularly the Hunter. Nature is currently in a state of crisis, with 954 species and 111 ecological communities listed as threatened in our State. Only 50 per cent of our threatened species are expected to survive the next 100 years. We believe the New South Wales Government must coordinate landscape restoration, in particular, to maximise biodiversity and connectivity outcomes.

Ms ABIGAIL BOYD: I'm sure my colleague will have some more questions, but I just wanted to start with this optimistic assessment for the future demand for coal. We heard from a lot of communities that part of the reticence to embracing renewables and part of the stress being put on coalmining communities is the lack of leadership and lack of plan from governments. It seems to me, and I'm sure you'll agree, that the continuing approval of coalmining and the endorsement of coalmining in New South Wales lasting much longer than it can under the science has to change eventually. Can you talk to us about the impacts of this arguing against reality that governments are doing, in the broader picture?

JADEN HARRIS: As we outlined in our submission, we think that the Government's current estimations for coal demand are overly optimistic. We've taken those figures from the future jobs and investment issues paper. The figures that the Government are relying on there are from the International Energy Agency's STEPS scenario, which is the stated policies scenario, which is by far their most overly optimistic for coal. That has got global coal demand declining by 10 per cent by 2030 and only 30 per cent by 2050. The other two scenarios that the International Energy Agency have modelled are the net zero emissions scenario, which is the only scenario compatible, as you said, with limiting global warming to 1.5 degrees—that has a 45 per cent reduction by 2030 and a 90 per cent reduction by 2050—and before that, there's the announced policies scenario, where coal demand globally is still declining 20 per cent by 2030 and 70 per cent by 2050. To just have picked one of those scenarios in that issues paper, we see it as totally overly optimistic.

It's not just the climate and the environmental damage that exporting that coal and having it burnt will do, but we're setting up communities to not appreciate the scale of the transformation in front of us, and we're not getting prepared to help minimise the damage that will come if we don't diversify economies and support communities. I'd add to that as well that Australia's coal exports are likely to decline much faster than global coal use. We're seeing around the world at the moment countries that are continuing to use coal. We'll always have a preference to use local coal, as opposed to imported, seaborne coal.

The International Energy Agency has some research on that as well, where they're talking about there being ample domestic supply in China and India. They're forecasting that the share of global thermal coal demand met by exports will decrease from 15 per cent to 13 per cent out to 2026, and Australia is likely to be one of the countries most impacted by that. These forecasts are that coal demand will be coming off, but it'll be coming off quicker than we think it is and we need to be preparing genuinely for that if we're going to avoid setting communities up for failure and having a range of stranded assets in these communities.

Ms ABIGAIL BOYD: If we set up these future jobs transition authorities, or whatever they're called—I just call them transition authorities—and they're set up on a faulty set of assumptions, are we just setting

communities up to fail? Is that a vital part of these authorities succeeding, that we actually have a proper understanding of the markets and where things are going?

JADEN HARRIS: Absolutely. I think that we could be having a range of scenarios to be planning for. What the issues paper mentions at the moment is simply one of them, but we should be prepared for a future where demand for coal decreases a lot more rapidly, in line with the 1.5 degree temperature goal. It's not just about avoiding the challenges that the transition will bring but addressing the opportunities as well. We're going to be missing out on the new industry opportunities in green steel, in advanced renewable manufacturing and in landscape rehabilitation if we're not planning for that now. Some of those investment decisions and those projects are going to take a while to come online. Green steel, in particular, is still some time away. What we're hearing from the clean energy sector is that businesses are looking at where the policies are to support those investment decisions now, and those jobs will go overseas if we don't have a plan and a framework in place to really support them.

Ms SUE HIGGINSON: I'm wondering about what you say in terms of land use and the intersection with the regeneration that clearly needs to happen and that we assume will happen, because that's the current status quo in terms of legal requirement, but also about the beneficial drawdown for carbon sequestration through the regeneration process and whether that is something we should be looking at. We keep making these assumptions that land use, for it to be productive and beneficial, has to have these jobs on the ground that are quite traditional. Is there, and do you see a place for, the regeneration jobs but also the services and the economy that comes from the carbon side of the equation?

JADEN HARRIS: Yes, absolutely. As we said in our submission, the economic and the employment benefits that landscape restoration provides shouldn't be overlooked. Landscape restoration is an incredibly labour-intensive industry, and we heard some of the unions mentioning that this morning as well. There's a range of employment opportunities as well in landscape restoration. Some of them are professional, some of them are semi-skilled, and some of them are skilled. It's machinery operators, ecologists, Indigenous rangers. There's a whole ecosystem of labour that can be supported in that and not only in those direct employment economic benefits for the regions but also in the natural capital values that it provides to the broader region, and the ecosystem services that support tourism, the sustainable agricultural industry and wine industry in the Hunter, in particular, and, as you said as well, the carbon benefits more broadly.

We think that any consideration of post-mining land use should, as a starting point, recognise those values and recognise the incredible opportunity, given the scale of the transformation that's occurring—or likely to occur—in the Hunter that we can become a world leader in landscape restoration. There will be a whole knowledge base and skills base that is quite valuable and that can be exported globally. To achieve that opportunity as well, in terms of the Future Jobs and Investment Authorities and the other frameworks and government policies in this area, we need recognition of the skills that are needed for that and more support for restoration and intake programs and training pathways.

Ms SUE HIGGINSON: You mentioned natural capital and the ecosystem services. Is that something that we need to do here in New South Wales? Is there work already to understand exactly what we mean, how we account and how we value, or is that work that we need to do as well?

JADEN HARRIS: I think there's some understanding of it. We saw recently in the Government's nature strategy in response to the Henry review that there's talk about natural capital accounting frameworks on a regional basis, and we think they should be on a statewide basis as well. Part of the problem, particularly in the Hunter, is that we don't have a really accurate picture of what the post-mining landscape will look like. We're not able to have a good understanding at a regional-wide landscape level of what restoration is going to be done. Where will there be final voids? What are the biodiversity values that will be created there?

As we mentioned in our submission, the Hunter is a particularly important area ecologically in New South Wales. If you look at a map of New South Wales along the divide, essentially from the Victorian border to the Queensland border, we've got large patches of vegetation, but the Hunter is an area that really stands out. It's at the northern-most extent of the Sydney Basin bioregion, the southern-most extent of the North Coast bioregion. It's an area where a lot of species meet their geographical limits. Anything that we can do to enhance biodiversity values, biodiversity corridors and connectivity outcomes in that area will have, hopefully, the ability to support species to extend their geographic range as climate change occurs. We need an accurate picture of what's going to be there before we start to consider what the other post-mining land uses would be, including clean energy, and it's desirable as those outcomes would be.

Ms SUE HIGGINSON: Just on that, are you saying, therefore, that those biodiversity outcomes would be a good threshold requisite outcome? Like, you define that first? If I was to mix, say, your submission with bits of the next submission from witnesses from Lock the Gate—they talk very poignantly about this extinction debt

and this deficit of nature that you're talking about now. Should it be a threshold of, "Actually fix the ecosystem and then everything from that can then benefit," and future land uses should be in addition to that?

JADEN HARRIS: Yes, absolutely. We can't do that until we've got a solid understanding of what that is, and then future planning proposals for alternative land uses should be assessed in a similar way, where if there was to be any vegetation losses or other ecosystem impact, they would be offset to the biodiversity offset scheme or avoided and mitigated in an appropriate hierarchy, as any other process in the planning system would be done.

The CHAIR: You talk about the need to balance the need for environmental outcomes with also the need to look at what the potential future uses are for mining land. You mentioned in your submission that there is considerable merit to using the existing infrastructure and utility connections for new clean industry opportunities. I want to invite you to talk more about what those opportunities could be and, indeed, any challenges that you are aware of in standing up that at the moment.

JACQUELINE MILLS: I think absolutely, as Jaden was outlining, we think there is definitely a place for sustainable clean energy projects in the post-mining land use landscape. I think making use of those sites where there is existing transmission lines or other infrastructure makes a lot of sense as well. One of the key aspects of this is ensuring that the rehabilitation requirements for those companies operating the mines are fully respected and those rehabilitation requirements are fully funded and the site is left in accordance with the final landform as outlined originally.

What we would say is that there is good scope for clean energy projects. But we would not want to see any pulling back from those obligations by virtue of passing them over to third parties that might want to operate clean energy sites or otherwise. There could be a range of different technologies at play in those sorts of environments. I think there are discussions afoot around solar farms, around pumped hydro, as some examples. The enthusiasm for some of those projects probably just needs to be balanced with the reality of what we face in the post-mining landscape. There is potential for ongoing ground and surface water contamination, for example, erosion, subsidence and, of course, these vast mine voids that are left even following the rehabilitation process as well.

One of the key principles around renewable energy projects is to ensure productive co-use where possible. We would seek to ensure that these sites have the biodiversity outcomes, but also if there is an opportunity to marry clean energy projects with agriculture, for example. We start to see some good examples of that, where you have solar farms and livestock grazing in proximity, which can work quite well.

The CHAIR: So you would say that a mixed use of some of these sites is something that you would support?

JACQUELINE MILLS: Yes.

The Hon. WES FANG: Ms Mills, on your last point there about mixed use—having, for example, a solar farm and stock grazing in the same vicinity—how does that work?

JACQUELINE MILLS: It's something that has come about more recently whereby there is an arrangement with a pastoralist to graze, for example, sheep or something like that, and the solar panels are on the same land. So the animals are able to graze underneath that and the solar panels are able to generate that electricity.

The Hon. WES FANG: When that happens, obviously with the solar farm itself covering the majority of the land, what is the regrowth like after the stock has been through there? What likelihood are they to have another pasture of similar quality given that the solar farms cover the majority of that field?

JACQUELINE MILLS: I'm not sure I fully understand the question.

The Hon. WES FANG: When you've got a solar farm and you've got stock that graze underneath it, usually they'll strip it fairly bare.

Ms SUE HIGGINSON: Just go to Uralla.

The Hon. WES FANG: If you'd like to answer the question, Ms Higginson, I'd suggest you go and join them on that side of the table and become a witness.

The CHAIR: Order!

The Hon. WES FANG: I'm asking Ms Mills here. We know that when you've got solar farms covering the majority of the field it creates issues with run-off when it rains. You've got issues with regrowth. What is the likelihood that you're going to get a second, third or fourth pasture in subsequent years to be able to graze cattle or sheep on underneath the solar panels?

Ms ABIGAIL BOYD: You know they're actually doing this in Uralla? It's become a more common thing.

The Hon. WES FANG: Also, Ms Boyd, if you would like to actually give evidence, then I would invite you to join—

Ms SUE HIGGINSON: You were asking questions like you didn't know. We're just trying to help.

The Hon. WES FANG: I know the answer. I'm asking Ms Mills. She's giving evidence.

The CHAIR: Order!

JACQUELINE MILLS: Through the Chair, just in response to the question, my understanding from the projects that are in place, in particular in places like the New England region, is that the pastoralists there have so far found that these approaches have worked pretty well for them. I'm not in a position to give you figures on the finances of their property. But I'm not familiar with any suggestions around problems with run-off or subsequent kind of declines in regrowth capacity.

The Hon. WES FANG: How do they go about managing the land underneath, with the solar panels there?

JACQUELINE MILLS: My understanding is that they use a range of techniques. I'm not a farmer, but my understanding is that they manage the land much as they have been, and they are able to do that with the solar panels. The animals also have the added benefit of shade.

The Hon. WES FANG: So it's your evidence then that it really makes no material difference having the field full of solar panels and that they can effectively just use the pasture underneath with no impact to the quality to the soil. Again, Ms Higginson, if you want to give evidence, go and jump on the other side. Otherwise, be quiet. I was not interrupting your questioning.

Ms SUE HIGGINSON: Sorry, Wes.

JACQUELINE MILLS: I'm not familiar with any reported detrimental impacts.

The Hon. WES FANG: Okay. In relation to some of the questions that were asked previously around exporting coal, if we were to cease immediately coal exports, where would those countries that import our coal likely receive their energy sources from?

JADEN HARRIS: As the International Energy Agency report is forecasting, and as they are forecasting, there will be a decline of global coal, seaborne trade, precisely because some of them are substituting for their own domestic coal at the moment, and they're building new coal-fired power stations, or the new coal-fired power stations that they have are better suited to a different type of coal from their local production capabilities.

The Hon. WES FANG: I guess that's not really answering the question I was asking though. Again, if the cheap seats over there would like to—

Ms SUE HIGGINSON: We're just talking to each other.

The Hon. WES FANG: You're doing it quite loudly. This is really getting out of hand, you two.

The CHAIR: Order! The Hon. Wes Fang will make his remarks through the Chair and stick to the questions.

The Hon. WES FANG: Chair, it's getting a bit much from these two. But, anyway, that is my point. Mr Harris, in relation to places that are receiving coal at the moment, if we were to turn off the tap, so to speak, and stop coal exports, is it likely that other markets are going to have access to the same quality of coal that we provide at the moment?

JADEN HARRIS: The point that I think we are really clear on making is that these are questions and these are decisions that are being made not here in Macquarie Street and not in Canberra but in these other countries. I mean, in the boardrooms of Tokyo.

The Hon. WES FANG: No, I appreciate that. I'll fast forward to where I am going with this. If we turn off the tap to coal now, as Ms Abigail Boyd indicated in her questions, isn't it likely that they are going to have to access lesser quality coal, which is ultimately going to result in higher emissions, given that they haven't had time to transition to another form, whether it be clean energy with nuclear or renewable energy such as wind or solar?

They're going to have to find another way to power their grids, given that they've only got thermally powered energy systems. They're going to have to burn something. If it's not our high-quality coal, then they're going to burn something that is going to end up with higher emissions because it's less efficient, like brown coal.

JADEN HARRIS: There is also some reporting from industry recently that some of the newer coal plants in Asia are being built precisely to cater for lower grades of coal, because that's where the increasing production in those home countries is available. So, whether we like it or not, it is absolutely the case that demand for coal in New South Wales is likely to decline. We are submitting that it will be likely to decline faster than we are currently anticipating it. We can make arguments about to what degree there would be some substitution, but there is also an important point to consider. That is, as one of the largest coal exporters in the world, any reduction of our supply from policies here would likely have some sort of an impact on the quantity of coal and the price of coal being consumed globally. Our submission is really, in terms of looking at what the impacts on communities will be and looking at the local environmental impacts, that we are doing ourselves a great disservice to underestimate the transformation that's in front of us.

The Hon. WES FANG: Can I at least get you to concede that, at the very least, if we turn off coal exports now from New South Wales, with our high-quality black coal, there is the potential that places that currently buy coal from us will end up burning less efficient, less-clean-burning coal, which is ultimately going to result in higher emissions. We might feel better about it, but we are doing the planet a disservice. Can you admit that at all? Can you even see that as a possibility?

JADEN HARRIS: But the plants that are constructed are configured to burn a certain quality of coal and so—

The Hon. WES FANG: No, that's fine, if that's the answer. I just want to see your ability to actually accept other—look, I can sometimes change my point of view.

Ms SUE HIGGINSON: Point of order: I don't think there is a question coming at the end of this.

The Hon. WES FANG: There was. I would have made sure there was.

The CHAIR: If we can move on.

The Hon. PETER PRIMROSE: Following up from the earlier questions, I'm seeking you to concede that a grazier with sheep who puts them on land where there are also solar panels would know better than any of us, and you, about whether that is appropriate or not. Would you accept that?

JACQUELINE MILLS: I don't object to what you are saying, but I'm not sure what the question is.

The Hon. PETER PRIMROSE: The question is that it's not up to those of us who aren't graziers, or members of Parliament, members of this Committee, or indeed yourselves. The sheer fact that graziers are choosing to do that and clearly, from your evidence, doing it effectively, it's a decision that they're making and they are in the best position to make that decision. Would that be a fair statement?

Ms SUE HIGGINSON: Heads nodding.

The CHAIR: In terms of the benefits of having multiple, successive uses, or uses that are happening concurrently, what are the potential positive impacts of that on a local community and also on the broader economy, really, when you think of places like the Hunter?

JADEN HARRIS: There's obviously a range of benefits, particularly with clean energy projects, whether it's new manufacturing or energy-intensive manufacturing opportunities, which are only possible to be built here in Australia because of our abundant, cheap, clean renewable energy supply. These and the opportunities for regions like the Hunter, as the world transitions to net zero, are really exciting and are really incredible. We think that the New South Wales economy and the Hunter economy will continue to benefit as a region that has powered this State for many decades, and will continue to but with new opportunities in renewable energy but also in landscape restoration and in valuing the biodiversity outcomes that we have.

As we've mentioned earlier there is a range of very exciting possibilities—whether it's offshore wind and the manufacturing opportunities and the local support services that come with that, or whether it's green steel, green ammonia, green iron. But also using the skills base that the Hunter has, in terms of tradespeople and those sectors where we have a lot of skills from the mining sector that can be used to make things like electric buses in New South Wales. There are exciting opportunities like that already happening there. A lot of those opportunities, as you mentioned, Chair, could be using the existing infrastructure and facilities that the mining industry has. But, as we said earlier, we think that should be done in a planned way where we are first recognising what the post-mining landforms would look like, and the outcomes that would deliver for biodiversity.

The CHAIR: Ms Mills did you have something to add before I move to another question?

JACQUELINE MILLS: Another question, thank you.

The CHAIR: In terms of the benefits in ensuring we have shared benefits for our community, how can we ensure that when we are looking at innovative ways to use land post-mining that the benefits are shared equally, or shared in such a way so that our community really stands to benefit?

JACQUELINE MILLS: What's important here is probably for us all to appreciate the scale of the transformation that's required for key regions, in particular the Hunter. There is a vast area of land where mining will come to an end in the coming decades. I think, as we've outlined, it's really important that we have an understanding of what that baseline is, in terms of environmental values, and we have confidence that final landforms will be achieved. I think one of the key things here to have that planned approach is to ensure that there is a suitable, independent authority that is tasked with looking at what the future could look like—an authority that really consults community as part of that. We would say that post-mining land use—the policies that relate to that and the purpose of that should relate to the public interest, and the community interest, not the interests of miners.

So an independent authority that helps policymakers to understand what is that environmental baseline, what are the various options, and actually sets out some objectives. Rather than an ad hoc approach we have a planned approach to what transformation of a region might look like with respect to diversification of economy, economic skills and training opportunities, as well as those biodiversity values and corridors that we mentioned. One thing that we see in many of these communities is that they have effectively been locked out of participation over the previous decades as mining has taken over the landscape. This is a real opportunity to actually empower them to have more of a say in what the future of their regions looks like.

Ms SUE HIGGINSON: Do you have any knowledge about the final voids? There are a lot of them. Your local member groups—I know there are some around the Hunter and so on—have they spoken to you about their concerns about how many final voids there are? In terms of a regeneration focus, is there any work across the world that we are looking at, or looking to in terms of informing this work at this earlier stage?

JADEN HARRIS: The final voids are of concern, particularly the water impacts, which I can speak briefly to. The Hunter River and the ecosystems around it, I don't think we do have a clear understanding of when restoration is done to avoid groundwater contamination from mines seeping into other waterways. The landform planning is generally for the drainage to be into a final void. I don't think we have a clear idea of what the long-term impacts on water security that will have. Obviously we are left with pits that will gradually become more contaminated over time.

I know Lock the Gate, who you are hearing from next, has done some more work in that area, as have some of our other local member groups. It is of real concern, and I think it is something to keep in mind when we are talking about the need to ensure that any post-mining land use isn't letting corporations off the hook for the damage that they've done, and for the obligations they have taken on when they received a mining lease, ensuring that those standards remain the same and as robust as they can be. We would argue at the moment that they are not robust enough; that we need further reforms to enhance those standards. That's really important to actually support future post-mining land use and to give certainty to other future users of the land and new industries, that they are not going to be developing new opportunities on land which is contaminated and is going to be a challenge to manage moving into the future.

Ms SUE HIGGINSON: We heard this earlier as well from somebody who was on council. He was saying that—clearly the reason we've got so many is because the mining corporations managed to successfully argue at the consent stage that it was far too expensive to deal with the final void; someone will deal with it later. So you're saying that we actually really need to look at that, and that the current conditions and settings probably aren't the best if we are looking at beneficial future land use, whatever the beneficial land uses are, going forward. We need to look back at what to do now about that.

JADEN HARRIS: Absolutely. We would mention as well that we know that the rehabilitation and security bonds are inadequate at the moment. We've heard discussion about whether a levy would be appropriate to help manage these risks. We think that is a sensible idea because at the moment it's going to be the public or future land users and the community that are left on the hook for this. I don't think it's in the best interests of anyone to see that being the legacy.

Ms SUE HIGGINSON: In your design of how you would best manage that, knowing what we all know in terms of the inadequacy of what is in the fund at the moment, where would you think is the best place to impose this levy?

JADEN HARRIS: It could be imposed in a few places. We don't have a detailed view on that, I should say. We can take that on notice and gather some of the views of our member groups. Whether it's at the point of coal extraction or at sale, there are a number of ways it could be done. But something that we think is really

important is that those funds and any expenditure in this area in future are guided by community voices as well and having environment groups, community groups and workers at the table facilitating those outcomes. Because, as others have said to this Committee, communities should have a say over what the future land uses are. They know what is best and what is needed in their regions.

That community input is something that has been missing to date. Whether it's through the Future Jobs and Investment Authorities—currently the proposed remit isn't looking at landscape restoration and community benefits, as important as future jobs and investment are. Perhaps there is another authority, or those functions should be included into that authority. Whatever that mechanism is that is distributing the funds, it needs to have a clear way for communities and local environment groups and workers to be putting their views about what the priorities are in those regions.

Ms SUE HIGGINSON: Does it concern you at all that I think about 20 mines have been signed off, as in closure plans have been signed off in the last four years? I've got it somewhere. Some of those closure plans have been quite different to what was the legacy. The landscape that's left is quite different to what was there beforehand. It may have been native vegetation, a functioning ecosystem and now it's being restored to grazing land. Does that concern you? In terms of this inquiry, where is our baseline? Where is our point? Where do we go back to in terms of measuring, if we were looking at this landscape regeneration and fixing the kind of ecosystem loss that we've created? Is there a baseline? Where do we start?

JADEN HARRIS: Yes, absolutely. We would submit that the baseline should be pre-mining land use. As a priority, when moving to a post-mining future in the Hunter, the native vegetation that was removed to facilitate mining should, at first, be restored. And if we're not restoring that in places where we have a beneficial post-mining land use, and in some cases that may absolutely be the case, then that vegetation should be offset elsewhere. That's why our point around having an authority that is dealing with that landscape level challenge is in place to take a regional view of that. Because where we are then deciding to rehabilitate native vegetation in other areas where it previously wasn't to facilitate post-mining land use, we could get great ecological outcomes for that. We could enhance connectivity even more, particularly the threatened ecosystems that were removed and the offset obligations that already exist on mining companies. We know that at the moment a lot of the mines have plans to create credits from their restoration that they need to generate. They must be delivered as a first priority. But overall, we should be aiming for a net increase in vegetation cover from all development, but particularly from the restoration of mines.

Ms SUE HIGGINSON: Does it concern you that now the Government has just put on the table that it's proposing to change the allowance of mine rehabilitation as an offset under the offset scheme? That's what mining corporations have been doing, and have been able to do, but the law going forward is recognising that is a failure in terms of nature positive or no net loss, even. Is there a concern there for you? Is there something we, as an inquiry, should be looking at in relation to that?

JADEN HARRIS: Yes, the functioning of the biodiversity offset scheme at the moment is of great concern and we are looking forward to the Government's foreshadowed reforms coming later this year. We absolutely think that there should be a much more stringent offset system for all development where we have no net loss but also clear red lines around areas and threatened species habitat that cannot be offset and cannot be restored and should not be destroyed in the first place. We look forward to that and we hope that reform will be very robust.

Ms SUE HIGGINSON: Do you think in terms of this inquiry— it's wonderful to hear your optimism and positivity around the opportunities for the Hunter and the Gunnedah Basin and those areas. Do you think, in terms of that approach, that we should actually be looking at opening up some of those flaws that have enabled mine rehabilitation that hasn't necessarily been best practice? Is that something we should be doing? Should it be all options are on the table?

JADEN HARRIS: Absolutely, particularly when we are considering the new opportunities the mining industry has in this State—the global transition to net zero and the demand for critical minerals, which are essential to decarbonise the economy. From whatever mining that is occurring, NCC's view is that the rehabilitation needs to be best standard. We need to ensure that the levies and the funds are there to rehabilitate land and enable its future use, and enable its return to beneficial biodiversity outcomes, absolutely.

The CHAIR: Just a final one from me if you can answer in the next two minutes. It may not be a question that can be answered in two minutes, so please feel free to take it on notice or otherwise. In terms of an independent regulatory framework or independent body that you have alluded to, what would be needed in that to ensure and maintain best practice in post-mining land use?

JADEN HARRIS: There are a few points to it. The proposed Future Jobs and Investment Authorities, as the Government is now describing them—I should say NCC is a member of the Hunter Jobs Alliance and we endorse the comments more broadly they've made. Whether it's through that authority or a separate authority that deals with restoration and landscape planning, is really a question for government. I think we think they could be together; they could be separate. What matters is that there is that planning and coordination by the Government to achieve outcomes on a regional level, and not to be having dozens of independent land-use decisions being made, which will create worse environmental outcomes—worse outcomes in term of jobs—and not give the community a clear avenue and a way to provide their feedback and actually have some ownership over the outcomes that are being created.

That's the key principle, really, for us, as well as the coordination. It's providing a way for the community to have a voice over the future of the land use in the region. Just briefly, in terms of why it's so important for the coordination and particularly from State Government, we've heard this question a few times about why is there the need for State authorities when the Federal Government is doing activities in these spaces? It's the State Government that has the levers over skills and training and TAFE. It's the State Government that has the levers over planning, but also in terms of local roads. So it is really important, instead of having multiple points across the Government trying to coordinate what is a very large and a very complex activity, to have a front door not only for the community but for workers who are looking to find training and skills pathways into the new opportunities or into the restoration, but also for the Government to coordinate itself through that way. Those are some of the examples that we've seen from Victoria and the Latrobe Valley Authority. It has really highlighted that importance.

The CHAIR: Thank you. That's all we have time for but thank you so much again for making the time to give evidence to the inquiry and for your submission. For questions that were taken on notice the Committee secretariat will get in touch.

(The witnesses withdrew.)

Ms GEORGINA WOODS, Head of Research and Investigations, Lock the Gate Alliance, before the Committee via videoconference, affirmed and examined

Mr STEVE PHILLIPS, Hunter Coordinator, Lock the Gate Alliance, before the Committee via videoconference, affirmed and examined

The CHAIR: Welcome to our next inquiry participants. Thank you so much for making the time to give evidence to the inquiry. Would either of you like to start by making a short opening statement?

GEORGINA WOODS: I might just say a few things, thank you. Like other speakers today, we are really grateful to the Committee for initiating this inquiry and allowing these issues to be aired and discussed in public. As we raised in our submission, we are aware that the New South Wales Government has been in discussion with mining companies for some years about these issues. So it's really valuable for the Parliament to inquire into them and allow the broader public the opportunity to get involved. Research has shown that when mining communities experience dramatic change and reduction in mining activity, they fare better in the ensuing change period if there is transparent and deliberate communication and involvement of the public and the community ahead of time in the changes that are going to occur.

We have been long advocating in the Hunter for this to be the case to involve the public in planning and considering what the future of the Hunter region is going to look like. I would just mention that subsequent to our submission Regional NSW has now launched a long-promised rehabilitation data portal which we are very excited about. We are yet to fully explore it but we do believe that it provides an opportunity to fill some of the gaps that we've raised in our submission in being able to paint a picture of what the post-mining landscape will look like in the mining-affected regions of New South Wales.

The CHAIR: Thank you. Mr Phillips, did you have any opening remarks?

STEVE PHILLIPS: No, thanks. Georgina can do that for both of us.

The CHAIR: Thank you. We'll move to questions.

Ms ABIGAIL BOYD: Good afternoon to both of you; it is lovely to see you. I note that Lock the Gate has advocated for a long time in relation to the inadequacy of securities and bonds that are kept for mining rehabilitation. I was struck in your submission by the comments around, basically, now this stage of the transition could lead to these companies being able to wriggle even further out of their legal obligations to rehabilitate. Could you talk the Committee through the risk there and I guess the necessity to try to capture some of that value from them before they walk away?

GEORGINA WOODS: Yes, thank you. I might kick off and then hand to Steve because he knows this one quite intimately. But essentially, as I said, the mining industry has been discussing post-mining land use with government agencies for quite some time. We obtained a freedom of information request which indicated that one of the key things that the companies were asking the Government to do was to absolve them of what they call residual risk. Under the New South Wales system for rehabilitation, as was mentioned earlier, there is a basic legal obligation to leave a mine site in a safe, stable and non-polluting state. There are also quite longstanding and detailed obligations to rehabilitate mine sites to restore, in large part, woodland areas that have been previously cleared, but also grazing land and, in some cases, cropping land commitments to return alluvial floodplain cropping land to its previous state, which will be interesting to see.

That will take quite some time and that is what the security deposits are designed to secure against—that job. But then, after the mining lease is relinquished, there is no arrangement in New South Wales to deal with what the Audit Office described as the long-term environmental risk. So issues that arise 20 years after the mine ceases operating to do with groundwater contamination, or erosion and subsidence—a number of things that have been evident in Newcastle and Cessnock for many years. At the moment the Mining Act provides that even if your mining authority has been relinquished, if there is something that needs to be done to protect the environment or enact against a risk, a previous holder of an authority that caused that risk is the person who can be directed by the Government to fix it. If they don't act on that direction, then the Government can fix it and recoup the money from them. I think this is the residual risk liability that the mining companies are uncomfortable with and that we are concerned needs to remain in place. Steve, have I done that accurately?

STEVE PHILLIPS: Yes, I think so. The residual risk, which we understand from GIPAA documents is one of the things that the mine operators are hoping to get out of through this process, and also the final land-use plans that are currently an obligation on these mines—and quite an important one, when you consider the context in which they were approved, and the widespread public alarm around impacts on biodiversity and loss of agricultural land. These projects were justified on the basis that these sites would be returned to these strict

criteria afterwards. We are quite concerned at signs that the post-mining land-use process and this rush to bring new industries in, which is obviously a welcome thing and particularly with the hardstand infrastructure, obviously there are some reforms that could be made there. But we are quite concerned that this process not be used to reduce the obligations on the community and environmental obligations on mines, which are really important parts of their approval. Hopefully we strengthen the rehabilitation obligations on the mines.

Ms ABIGAIL BOYD: We heard this morning about the Muswellbrook Shire Council example involving Liddell. I was trying to get a bit more detail about exactly what the rehabilitation obligations on the companies involved in that were, as part of that agreement. I don't think I got the details I was after. I was wondering if you were across the details of that arrangement, and if you know whether any corners were cut in terms of rehabilitation when they were getting into that deal.

GEORGINA WOODS: Ms Boyd, I don't know the details in depth of that, but I have certainly looked at the Muswellbrook mine rehabilitation final land-use image which Steve referred to. All the mines have to have this projection of their final land use, and it doesn't include all the infrastructure that has been negotiated with Muswellbrook council. As was pointed out earlier today, that mine operates under a consent from Muswellbrook council themselves, so the mine was able to discuss that matter directly with their consent authority. It hasn't been easy outside of Muswellbrook. Perhaps there have been community sessions locally in town about it, but it hasn't been easy to get the obligations that Idemitsu had on that site with the pieces of information that were coming out about the proposals they were putting forward.

Ms ABIGAIL BOYD: Just a final question from me before I hand over to my colleagues. I know that you've spent a long time looking at those coal-fired power station sites, and the rehabilitation of, particularly, the ash dams that will be required before any other industry could viably take place on that land. At the moment the future jobs—I keep forgetting what this thing is called but, basically the jobs transition authority being proposed by the New South Wales Government at the moment doesn't explicitly include those coal-fired power stations. It's really focused on the mines. Can you explain to us a little bit about what would need to happen at sites like Liddell before you could viably turn them into some other productive land use?

GEORGINA WOODS: You may be confusing us with the Hunter Community Environment Centre who do a lot of work on the ash dams at the mine sites. They are our colleagues. Both Steve and I have been at one time or another on the committee for the environment centre. But Lock the Gate doesn't work on power station sites. Our knowledge is in the impacts of the mining industry on land and water risks. Steve, I don't know if you have anything to say about the ash dams?

STEVE PHILLIPS: No, I don't. We don't really do power stations, Abigail, sorry. Certainly we can talk about the rehab barriers that stand between the mine sites and any viable post-mining land uses, but no, not for the power stations.

Ms ABIGAIL BOYD: I wasn't confusing you; I was perhaps just associating you in a glorious—

GEORGINA WOODS: It's a fair association, for sure. Obviously I have read the environment centre's report. There is certainly a great legacy problem with those ash dams. They need a standing obligation to recycle that ash because it is causing heavy metal pollution in the lake and other waterways. I guess our perspective on where the mines fit into that is that they don't have sites quite as large and dramatic as those ash dams, but they do certainly have tailings dams and frequently are dealing with heavy metals and salt on site. This is part of the ongoing obligation to prevent pollution and, in our view, is something that will last long after the mining leases are relinquished.

Ms ABIGAIL BOYD: This really is the final question. It's related. I know that there has been a bit of a history of some of these coal-fired power stations taking the coal ash and filling mine voids with them. What are the risks involved in doing that in terms of then using the land afterwards?

GEORGINA WOODS: Yes. There was an arrangement I think with the Drayton mine to do that—which is now closed—with one of the power stations. The risks are fairly complicated. One of the reasons why the final voids issue is so difficult is that the voids, when left open, create what's known as a groundwater sink. They draw groundwater in from the surrounding area on an ongoing basis, and because the water in the pit lake continues to evaporate, it's basically a pump for groundwater. From one environmental perspective you can see that is somewhat desirable, in the sense that you are guaranteeing for at least a couple of hundred years there isn't going to be a push of contaminated water out of the mine site and into the surrounding areas. If you just loosely fill a mine void with soil, then it becomes a bit of a groundwater bubble. Because it's much less consolidated than the surrounding rock areas it actually collects a lot more water and then starts pushing groundwater into the surrounding aquifers. If you had coal ash or other metals, soluble metals in that material, then, yes, you would then begin potentially presenting a risk of groundwater contamination.

Ms SUE HIGGINSON: This is to either of you, whoever would like to answer. I asked the Government recently how much they actually hold in security bonds or security deposits for rehabilitation of mining. It's in the category of mining production and exploration authorisations and it covers the whole of the State. They gave me a figure of \$3.9 billion in those security deposits. Is that a figure that you understand at the moment? I know we say there is not enough money, but is that a figure you're aware of?

STEVE PHILLIPS: It rings true. One of my colleagues has been updating our records based on some—there has been, over the past few years definitely, and it's to be applauded, a concerted effort by the regulator to increase the amount of bonds held by the mines. It certainly has increased dramatically over the last few years. There are still unanswered questions about whether it's enough, when you consider the scale of these things and all of the contingencies and unknown variables. In 2017, as has been mentioned, the Audit Office of New South Wales reviewed the system. There have been reforms since then, but not all of the recommendations have been met and certainly we're not confident that the system is adequate to the task yet.

Ms SUE HIGGINSON: Yes, \$3.9 billion might sound like a lot but when you do the bird's-eye view of the landscape and you consider all of those undergrounds south of Sydney et cetera, realistically it seems like it's a pretty small amount. I have two points. I want to go back to the final voids in a moment and I also want to touch on the First Nations issue that you raise. In terms of the final voids, they are across the landscape; they're not just in the Hunter. There are some massive ones in the Gunnedah Basin.

When you talk about the impacts that those final voids are likely to have on natural water resources, are you able to just elaborate a little bit more on that? You touched on it, but what is it? What are we facing in some of these areas where we are impacting—whether it's the Namoi or the Hunter—these very, very important water resources that we continue now to rely on to justify continuing land uses including agriculture, viticulture; all of these important land uses. Do you think there will be impacts that we haven't anticipated yet that we are likely to see over the next several decades around these final voids?

STEVE PHILLIPS: I think that is definitely a big risk. It's been hard to even get an answer out of the agencies who manage the mine leases and approvals about how many voids have been approved; how it all integrates together, impact wise; and what the cumulative impact of these scores of large voids approved across the Hunter and, as you say, elsewhere, will be. Certainly one thing that we are calling for as part of a renewed regulatory push on rehabilitation and an overarching coordination of it on a valley-wide scale here in the Hunter, there needs to be some kind of study into the cumulative impacts of these voids and what kind of management will be required of them in the long term because they have been approved on a one-by-one basis over many years without any consideration of what it might all mean in the long term. I think Georgina can talk a bit more about the impact that voids have on the regional water table balance as well.

GEORGINA WOODS: Yes. When they undertake their assessments of the water impacts of each of the mines, they run their water models and the impacts of the voids continue for 200 or 300 years after mining ceases. That is because, as I've described it, they act as a groundwater pump, essentially, because they are open to the sky. Evaporation is going to become more intense under climate change. The water is evaporating all the time and therefore it doesn't reach equilibrium for hundreds of years. The actual equilibrium point varies mine by mine, but as Steve said, I think the reason why our submission was trying to draw attention to the need to understand the environmental legacy of mining on the whole is partly because, yes, some mines have run models that understand the impact that they have in combination with an adjacent mine—one or two adjacent mines. But the impact on the Hunter catchment as a whole in particular, and certainly the Namoi as well, as you point out, hasn't really been properly looked at.

There was a very good study done by the department of water—I can't remember what they were called at the time; the Mid Hunter Groundwater study and then the Hunter regional—I will think of it. They tried to understand the ongoing loss of the river to the mines and loss of aquifer water. I think people need to understand that, in the Hunter, Hunter Valley Operations is one of the largest mines in the region and it straddles the Hunter River. It's supposed to build an impermeable wall because it is coming so close, eating into the actual aquifer of the Hunter River. If that wall wasn't there, the river itself would just start leaking continually into the mine. A similar impermeable wall for an alluvial aquifer has been proposed for one of the Namoi mines.

I think our concern, and one thing we wanted to stress to the Committee today, is there have been a lot of decisions that have been made on a short-term basis. What are we going to be doing for the next five years? What are we going to do after the next 10 years? What we really encourage the Parliament to do is think, "This is something that will take 25 years to set in place and it needs to last for a few centuries beyond that." It needs to think about the impact of climate change and the ongoing change in the environment that is going to occur as a result of the impacts that mining has had on water resources and biodiversity and the community. We really hope that there—that's why we're advocating for a commissioner to describe the situation as we understand it. What do

we know about how mining, what the landscape of the Hunter and the Namoi will look like post-mining? What do we need to know before we start handing out development consents to new activities?

Ms SUE HIGGINSON: So a basic audit. We need to literally do an audit of the ongoing land impacts and capability before we can start. That hasn't been done but there is a lot of material out there in terms of what the cumulative impacts are.

GEORGINA WOODS: I think so. We would also say that such a thing needs to look properly at the social impacts of mining as well. Because there is a lot of excited talk about the amount of money that mining generates, and that is very true. The Hunter is the biggest regional economy in the country. But there is a lot of social disadvantage in the Hunter; in Muswellbrook in particular. Muswellbrook is in the lowest quartile for socio-economic indicators in the country. That is after 15 years of the mining boom. So it's not a story of unmitigated financial success. A discussion of the social dislocation and the inequality I think would also be valuable.

The CHAIR: Ms Woods and Mr Phillips, you mentioned about the long-term environmental risk. Do you have a position on how best we deal with that?

STEVE PHILLIPS: The first point is that it should most certainly not be the New South Wales public that's wearing the risk, carrying that risk burden. As Georgina pointed out, legislatively in the Mining Act now there is a mechanism by which even if a leaseholder has relinquished its lease, the Government can come after them for those costs. Whether or not there will still be an entity to go after I guess is the big question.

The CHAIR: That is the big question. Or they might be bankrupt, miraculously, or something.

STEVE PHILLIPS: Certainly the Audit Office recommendation from 2017 is an important one that needs to be followed up. They proposed a sinking fund mechanism, whereby it would be the companies, obviously, that paid money into this fund that they would not expect to get back and that fund would be used to deal with any unforeseen post-mining lease handback rehabilitation failures.

GEORGINA WOODS: Yes. Someone mentioned the work that Germany does in this area earlier today. I was reminded that the Germans have this phrase called "the eternity tasks". They have a huge pot of money to spend on the eternity tasks of post-mining landscape management which is basically, "We know we're going to have to keep on monitoring. We know we're going to have to keep on weeding. We know we're going to have to keep on dressing the soil," whatever it might be. It's ongoing employment. The neglect of rehabilitation is a neglect of an opportunity to give the Hunter people responsibility for the land, and a role in managing and restoring it. We have heard anecdotally from coalminers how much they enjoy when it comes to the part of the job that is reshaping the spoil piles for rehabilitation. It gives them a sense that they are making good on the damage that the mine has done. They love it. We think that if the Government properly costed a genuine landscape restoration plan, it could be a part of the ongoing employment story for the region.

The CHAIR: In terms of the security bonds—you were talking about this earlier—my understanding is that the mines aren't signed off by the regulator for many years after the mine has entered into care and maintenance. Is that correct?

STEVE PHILLIPS: They can have part of their bond handed back if they have an area of rehabilitation signed off, without having their whole site handed back. But I think as Martin Rush alluded to earlier in the day, it's unclear. Nobody seems to know of any former mine site being completely signed off and relinquished vis a vis its rehabilitation obligations. So really it remains to be seen.

GEORGINA WOODS: "Care and maintenance" is the term for when the mine hasn't closed but is just not operating. So it's more relinquishment, I would say, would be the term you would want there, Ms Suvaal.

The CHAIR: In terms of now looking at maximising the opportunities—you mentioned earlier about the social aspects and looking at the social value—does Lock the Gate have a view around the potential benefit in allowing, say, a mixed use of a site, so that we are allowing multiple land uses, if that makes sense?

STEVE PHILLIPS: As long as it doesn't come at the expense of rehabilitation obligations and community and environmental outcomes that is [disorder] support.

GEORGINA WOODS: A few years ago we commissioned EY to have a look at mine sites in the Hunter according to their legal closure dates that were currently on the books then. We took the biodiversity climate change corridor mapping and the existing offset sites that they had already committed to, and then had a look at a few infrastructure sites in the mines to say, "Well, this one is not in a biodiversity corridor, is close to the rail line, could be a potential industrial site of one kind or another." I think our main point on that, as Steve said, would be this is a case-by-case basis. Essentially what the Hunter needs is an ecological restoration process

and a very targeted identification of where things can be built that doesn't come at the expense of the river and the landscape.

STEVE PHILLIPS: I think one of the main points we'd like to get across here is that that can't be separate from this post-mining land-use development reform. The rehabilitation story can't really be separated from the "what comes next on these sites" story.

GEORGINA WOODS: If I can jump in again, you asked about our views on how best to manage it. One of our disappointments with the current issues paper on the Future Jobs Investment Authorities is: What the Hunter and the Namoi have suffered from when it comes to the mining industry is a sort of retraction of decision-making power and agency out of the region and into Sydney where not only are all the mines State significant development and therefore determined by a different process, but local government doesn't make a decision. But local leadership of government agencies on biodiversity, water, health and Aboriginal culture also lost responsibility for giving advice on those things. Our most important message to the Committee is that giving the Hunter community the agency and control on this is the crucial thing. There will be lots of disagreement amongst people in the Hunter about what to put in one place or another. But the difference that it will make for people to actually feel like the region finally now gets to have a say and a real hand in its future is the most important thing.

The CHAIR: You touch on the importance of a place strategy. Is that what you're talking about when you mention that? How individualised do you think that needs to be?

GEORGINA WOODS: I put that in the submission because the regional plan did raise the idea of changing the final land-use obligations of the companies. Then we didn't really hear much more about it after that. They said each of them would be done with this singular place strategy. But I wasn't able to find any examples of that actually occurring. I don't know if they did it for Liddell but, I guess, yes. We do think of this as quite specific to place and I suppose there is this constant tension between everybody feeling like everything needs to happen yesterday, and it's all about the pace and getting things rolling very quickly. In our experience, actually involving people in localised decision-making processes doesn't really take longer than, for example, a State significant planning process that ends up taking eight years anyway because people are objecting. The difference in the quality of the outcome is substantial. So, yes, we would err on the side of the more particular, the more local, and the more involved for the people who are directly affected by the decisions.

The CHAIR: You mentioned in your submission also potential changes in the planning processes, but also new models of development that maximise local benefits such as community ownership and profit-sharing schemes. I just wondered if you had any examples of what those changes in planning processes would be, or any of the other new models of development that you've suggested?

GEORGINA WOODS: We weren't talking about observing changes but requiring changes.

The CHAIR: Sure.

GEORGINA WOODS: Because we don't really think that the planning system as it currently operates provides for that, essentially. It took the communities of the North West and the Hunter and the Central West a long time to get the social impacts of mining recognised in the assessment process, and for the mines to start creating these community benefit schemes that they now have to put money into. The centralisation of planning decisions just doesn't lend itself to the decision being made in a way that understands what exactly it is that local people want and need. We work with a community renewables company in the North West called Geni.Energy, and they are very involved in the community renewables network. We could possibly take on notice specifics about how they see the planning process inhibiting and enabling community benefits and community owned renewables. That would certainly be where we would want the system to go. Something that is decided by local people and delivering something that is very particular to an area because they are all so different.

The CHAIR: Thank you.

STEVE PHILLIPS: More tangible results. One of the things we noticed a lot in Muswellbrook is, I guess, disgruntlement about the perception that a lot of the benefits from the mining industry are flowing out and not much is staying there. Part of that is the movement of decision-making out of the area that Georgina alludes to. These reforms and the diversification of the industry in the area are an opportunity to reverse that, and I think it will make local people a lot more welcoming of what comes next also.

The CHAIR: I know that you've mentioned your views around having a regional commissioner, if you like. But in terms of an independent regulatory framework to oversee and ensure best practice in post-mining land use for both community and others, what would that framework look like, ideally?

GEORGINA WOODS: I'll begin. We've talked a lot through this internally and with other allies and I think in general our view is that it could be done multiple ways, as long as the key principles were there. Our

frustration with the expert panel process, and now with the Future Jobs and Investment Authorities issues paper, is that it treats community as a panel to be consulted. A selection of six people and that's our job done, sort of thing rather than saying, "Well, actually, we need there to be community investment and buy-in and knowledge and ownership of this in order for it to work." So whether it is a coordinated effort among agencies overseen by DPC, or our preference is a statutory authority mostly because it's enduring, it has its own line item in the budget. Whatever it is, it has to be regionally located. That's our main point, would you say, Steve?

STEVE PHILLIPS: Yes. Our proposed model is the regional agency that answers directly to DPC, so cutting out the layers of various advisory entities that are proposed in the Future Jobs and Investment Authorities issues paper. We see the nuts-and-bolts work happening with an agency very much on the ground, but with minimal interference between there and Cabinet.

GEORGINA WOODS: But because the Future Jobs and Investment Authorities issues paper didn't really put rehabilitation into the role of that authority, we do see the role for a rehabilitation commissioner as necessary, if it's not going to be a part of the remit. We do think that, as we've heard in the hearing today, this is supposed to be a hearing about post-mining land use but it's actually about all these other things. It's actually about how we make energy; it's actually about the planning system; and it's actually about all these other things. We see that connection and we would rather there be a system that enabled all of the elements of it to be brought together.

The CHAIR: Ideally, would rehabilitation be in that role of the Future Jobs and Investment Authorities or is it better if it's a standalone other entity?

STEVE PHILLIPS: We think there should be a coordinating agency in charge of the whole transition story, including the rehabilitation. But if that isn't the go, then there needs to be something separate, yes.

The CHAIR: When you talk about the need for something to be embedded in the community as opposed to just having six community appointed people on a panel, how are you talking about achieving that? It's one thing to have a local shopfront in a community but are people going to necessarily access it? Is that the best way to do things?

GEORGINA WOODS: Again, I think there would be multiple ways that the agency could go about its work. Having the staff, the leadership of the agency in the region is the crucial thing. It would need to be mandated to do public outreach. There would definitely be a large proportion of the public in the Hunter that have consultation fatigue and don't want to have a bar of it. But I think a demonstration that this thing was going to last and that it actually had to get the public's views because it had to be responsive to them, would probably, over time, overcome that cynicism. I think the cynicism has largely been bred by processes that have run in the planning system where people feel like they've had their say and been ignored, essentially.

STEVE PHILLIPS: I think it's important to avoid that panel consultation model, which we feel like we've seen too much of, where a community consultation box is checked by just appointing a panel which fulfils that purpose from now on, and then no-one else in the community has any idea what's actually going on with it.

GEORGINA WOODS: We actually had a really hard time getting information, even through GIPAA, about what the Hunter expert panel was discussing. It's supposed to represent the community and we're like, "We'd love to see the paper that you discussed," but, no, we can't get it. I think that is partly what breeds the cynicism.

Ms SUE HIGGINSON: Can I just go back to the First Nations outcomes? In terms of being allies, I noticed you put that in your submission and a couple of other submissions contain the outcomes for First Nations people through this process. I was just hoping you could touch on—I think maybe you did a bit—the fact that there has been real resistance from First Nations communities to certain mining projects. Some of that resistance has been successful marginally but a lot of it has been hard fought and not necessarily won. I'm thinking of certain challenges in court and certain mining projects—

The Hon. WES FANG: Driven by you.

Ms SUE HIGGINSON: Yes, some run by me; some run by others. What do we do now in terms of First Nations people but also in terms of the loss and the impacts on First Nations communities? Do you think that is well understood, identified and articulated or is that work that this inquiry should also be looking at?

GEORGINA WOODS: It's definitely work that you should be looking at. I think we have encountered it and articulated quite a number of times, actually, in relation to the western mines—the Mudgee mines—the Wilpinjong, Moolarben, Ulan and the other one.

Ms SUE HIGGINSON: There are a lot of them.

GEORGINA WOODS: There has been reference made frequently in the assessment materials. I think in our submission we refer to the Hawkins-Rumker exploration release process to this cumulative loss, an

intergenerational loss, of culture as an impact of mining in the area. That's obviously happened in the Hunter. I guess we would say that there are two distinct and equally important elements to this—probably more than two, but there are at least two. One is the cultural heritage impact of mining. We've seen big resistance from people in Gomeroi country against the Maules Creek mine because of the sensitive sites and the forest that it was clearing; strong resistance from Wonnarua people to the expansion of the Glendell mine in the Ravensworth estate; a number of other mines in the central part of the Hunter; and from Wonnarua people against the loss of Saddle Ridge to the Warkworth Continuation Project.

I guess that continual loss of not just heritage sites and artefacts but also of landscape should definitely be under consideration. I think it would take quite concerted attention of the Committee to tease it out because certainly in Wonnarua country the mines have bred a lot of conflict and there has been a lot of conflict over the vision. But the flipside of it for us is that with the very large landholdings that are owned by the mining companies, in the Hunter specifically, there is actually a lot of land that could be an economic opportunity for Aboriginal communities. A lot of land was taken from Aboriginal communities not just at the first site of dispossession when the English first came, but even in the twentieth century in the second wave of dispossession that happened in the 1920s. There is a lot of land. Everyone is just walking around now going, "There is all this land. What are we going to do with all this land?" There is a fairly obvious option on the table, which is to talk to Wonnarua, Gomeroi and Wiradjuri people about what they think should be done with it.

Ms SUE HIGGINSON: Did you want to add something Mr Phillips, as well?

STEVE PHILLIPS: No, no. That's a good calculation.

Ms SUE HIGGINSON: That is really insightful. Thank you very much.

The CHAIR: That is all we have time for in this session. I want to thank you both again for making time to give evidence to the inquiry today. The Committee secretariat will be in touch with you with regard to any questions that were taken on notice.

(The witnesses withdrew.)

Mr GARRY BOOTH, Chairman, Wandarra, sworn and examined

Dr ANTONIO PANTALONE, Director, Advanced Simplicity, sworn and examined

The CHAIR: Welcome to our next witnesses, and thank you so much for making time to give evidence to the inquiry and for your submission. Would either of you like to start by making an opening statement?

ANTONIO PANTALONE: I will, thank you. The opening line of the Chair's foreword in the inquiry into the industrial hemp industry in Victoria that was published in November 2023 reads as follows, "Cannabis sativa or industrial hemp is one of the botanical world's super plants. The global market for industrial hemp is expected to hit around US\$18 billion by 2027. The main stakeholders are currently Canada, China and France. Double digit annual growth rates are expected. This is not a cottage industry. Australia's potential within this space is immense, with natural advantages such as land area, climate, excellent farming, and homegrown technology that rivals anyone else in the world, yet we are still a blip on the radar."

I have with me today the Chairman of Wandarra, an industrial hemp company based in Townsville, Queensland, of which I am also a special adviser to. The company is currently growing 100 hectares of industrial hemp for seed, followed by a plan to undergo a carbon credit methodology for the remaining biomass. The main focus, though, is to establish a manufacturing hub in North Queensland to process and value-add to industrial hemp. I introduce this today to demonstrate that the information included in our submission is all based on previous experience, ongoing work and businesses conducted either in Australia or internationally. Our submission to the inquiry took a holistic and circular approach to the design and integration of technology.

We also tried to identify the benefits for the community such as ongoing employment, training a new workforce for the green economy, creating new service and supply chains and wideranging environmental benefits. I would like to highlight within our recommendation for the establishment of a sustainability hub, providing an important learning component and a prelude to a centre of excellence to further build knowledge in the areas of cannabis, sustainability and the environment, to name a few.

Our recommendations at this stage for advanced manufacturing address key issues of national concern including food security, construction materials, sustainable fabrics and environmental protection. The opportunity exists to manufacture Australian technologies, including concentrated solar thermal panels which can be implemented onsite to provide renewable energy and heat. Additionally, local manufacture provides important intellectual property protection. All of this supports national initiatives such as a Future Made in Australia. Our focus was clearly on the Mount Arthur coalmine located in the Hunter Valley of New South Wales. We see this as an opportunity to create a blueprint for beneficial and productive post-mining land use across the country. Thank you.

Ms SUE HIGGINSON: So your focus on Mount Arthur was hence your focus with BHP. Was that the correlation there?

ANTONIO PANTALONE: The correlation is that we're aware of—

Ms SUE HIGGINSON: What is your relationship with BHP?

ANTONIO PANTALONE: There is none.

Ms SUE HIGGINSON: I just saw something about you promoting BHP to make it a leader in the green—

ANTONIO PANTALONE: Well that is their site.

Ms SUE HIGGINSON: Yes.

ANTONIO PANTALONE: So obviously if we are looking specifically at their site as a blueprint they would effectively be able to take that pathway in becoming that leader in the vibrant green economy, as I think we described it.

Ms SUE HIGGINSON: Have you had any uptake? Is there a relationship happening there?

ANTONIO PANTALONE: It's still very early stages. We've made the submission and now we're at the hearing. From here we will see what happens.

Ms SUE HIGGINSON: In terms of the wonder plant—I disclose as a farmer I have actually trial cropped hemp—our experience was much more difficult than we were in fact led to believe. What is required for the uptake of people in the landscape who want to be a part of this? What will be required to get this plant, as a

product, up and out of the ground so that it is part of the regeneration capacity of these post-mining areas? What support is needed?

ANTONIO PANTALONE: Our experience, particularly with Wandarra—I mentioned the focus now is to build a manufacturing hub. We've discovered that farmers are quite happy to look at a new plant like hemp, and particularly large farmers with land and experience. The Hunter Valley is actually an area that grows hemp at the moment. But the question becomes: What happens after you grow it? Where is the offtake? What is that offtake going to do? In our opinion, by becoming the offtake partner, the company can take that hemp after it's grown and transform it into something that's valuable and able to be sold on the market, and create a business from that. It is encouragement to farmers knowing that they will be adequately paid and remunerated. To look at it as a crop, or as a rotational crop as it is quite a good rotational crop, to then encourage the industry and promote the industry.

GARRY BOOTH: It's remained, within reason, a cottage industry for a lot of people, unlike, say, cotton and other crops where you've got large gins and processing facilities. Hemp will only be a by-product, if you like, unless there are proper facilities built to turn it into or transform it into a product that is high value for the domestic market and also for export, which you can do. There is a strong demand for this sort of product in Japan, Korea and Asia. But for any Australian farmer or group to realise that, they need a business to sell to that can give them stability, to know they're there next year. As Antonio said, with intellectual property, understanding how you can take it from one product and transform it into another and also process that crop. Without the right facilities it's just going to be a cottage industry.

Ms SUE HIGGINSON: Under your model where do you say the direct investment in that comes from? Are you saying it should be the mining corporations as they wind up or is it though the levies and the bonds? What is the financial model? I am with you, and so are a lot of us. We know the power of hemp for food and fibre and its land regeneration capacity. I'm a devotee, so to speak.

The Hon. WES FANG: Is this about you or them?

Ms SUE HIGGINSON: This is why I'm asking. Even somebody like me who had capacity, put crops in, that sort of thing, you get to a point and it stops.

GARRY BOOTH: Correct.

Ms SUE HIGGINSON: Because there is nothing happening in New South Wales.

The Hon. WES FANG: Where is the question?

Ms SUE HIGGINSON: Who starts that next spot?

ANTONIO PANTALONE: The short answer, I think, is that it's not something we have discussed or contemplated. But we are more than open to have these discussions with the miners, with the various government bodies, with industry who would be looking to come on board, provided that the scenario works for them.

Ms SUE HIGGINSON: So therefore you're suggesting that this inquiry—I think that is pretty clear in your submission—when we are talking about the post-mining use of land, this needs to be well and truly in the mix in all of those local discussions we are having?

GARRY BOOTH: One hundred per cent. It's also a great rehabilitator of land. It marries rehabilitation with—you talk about the Hunter Valley. We went to the last hemp conference which was in the Hunter Valley, three days worth. People flew in from offshore, we had various universities there, CSIRO, and groups all talking about the potential. But the lack of processing was holding the whole industry back. In Canada it's going forward in leaps and bounds, the same as in France. We can do better. We've got a better climate than both of those countries. The issue is we don't have the infrastructure to actually make it happen. In the Hunter Valley which is the ideal place climate-wise, transport-wise and population-wise, that's where we'd like to be, if we could possibly be. We could rehabilitate the land. We could achieve multiple outcomes. That's really what we're talking about.

Ms SUE HIGGINSON: Fantastic, thank you.

The CHAIR: What sorts of capital costs are we looking at upfront to establish the required processing and things that are also needed in order to make this viable, just following on from what Ms Higginson was asking?

ANTONIO PANTALONE: To begin with, we'd really have to take a step back and look at things like data, the scope of works, have more site information. To be frank, we couldn't give you a real number now. If we look at things like a decorticator, a decorticator can range between \$600,000 to \$2 million. It comes down to what they do, how they do it, size et cetera. Until we could really scope out exactly the size of potential crops, not just

on site but those around, the ability to grow the industry et cetera, how far we would look at processing, doing it on site and bringing in technology partners, I really couldn't give you an accurate figure.

GARRY BOOTH: Would you like a ballpark figure?

The CHAIR: Ballpark is great; anything.

ANTONIO PANTALONE: I wouldn't. I apologise, it would just be too hard to give a ballpark without contemplating this a little bit further. We would be talking out of turn to just throw out a figure and potentially have that on the record and then get caught with it.

Ms SUE HIGGINSON: Mr Booth is championing at the bit.

The CHAIR: In terms of the North Queensland experience, if I could just ask you to reflect on that. Have you got any examples there? I'm not sure how far progressed that is in establishing some of this other infrastructure. Have you got any other examples there on how that was achieved and what were the obstacles that you had to overcome along the way?

GARRY BOOTH: In Queensland we've got the support of the Department of Agriculture and Fisheries and Queensland Treasury. We've also got a lot of First Nations support. They're important to us for providers of farmland. In fact last week on Friday we had probably one of the leading advocates from Queensland here in Sydney—they're all flying to Sydney—to talk about what they want for their people and, effectively, how we look at providing not just education but working with them to grow crops so they're self-sustainable in their own right and become skilled farmers. He says that's what they want. They want independence; they want to be able to be proud of what they do.

But the only way that can happen is if we actually build the type of infrastructure there for all farmers to have an offtake company that can transform that product into high value products, including homes. We can make floors and walls and roofs and all sorts of stuff out of hemp, but also medicines, health products and carbon offsets into soil. There are hundreds of different outcomes. If you're asking about Queensland in particular, we have a site next to Townsville city, near the port. We've got a lease on a large shed, a reasonable complex, and we're building—a business from Austria is coming here to do—

ANTONIO PANTALONE: Germany.

GARRY BOOTH: Sorry, from Germany, yes. A business from Germany is coming here to build things like plates and packaging out of hemp.

ANTONIO PANTALONE: Sustainable packaging.

GARRY BOOTH: Sustainable packaging. The other business up there is building building products out of hemp. The whole idea that you can grow a home in a paddock, which pretty much you can with hemp. We talk about product shortages in homes. A good industry can supply all of that.

ANTONIO PANTALONE: Just to add to that, we are also engaged with NAIF at a Federal level. Being north Australia, we are in the region for them to look at a loan to help us build that infrastructure out.

The CHAIR: Given that we are looking at post-mining land use, were you able to use any of the existing infrastructure that was on site or would that be a possibility with the Hunter Valley?

ANTONIO PANTALONE: Within the Hunter Valley it is definitely possible from what we know so far. With regard to Queensland, everything has pretty much been a greenfield build out. Wandarra is engaged with one of the mining companies up there to look at using hemp to rehabilitate their site. We're also looking at how that partnership would work. We have moved that along quite a lot. Mount Isa Mines, as you may be aware, are closing down, and we've been invited in to have those discussions. However, looking at the Hunter Valley—and again we specifically looked at Mount Arthur because we know there is a lot of infrastructure there that would really fast-track this and that we could really benefit from.

The CHAIR: What infrastructure is it that you are requiring?

ANTONIO PANTALONE: Access. For example, roads, train lines, the sheds that are there. We're not fully aware of what's actually in them yet. As I said, this is still very early stages for us. But we would expect that there would be equipment that we could take advantage of. Also the land area that would be available, water access, and the fact that we would be able to take crops that are grown and process them literally a couple of hundred metres away—massively beneficial from a cost perspective.

The CHAIR: In terms of the land use, have you done any work on concurrent land uses? Say you've got an existing mine but you've got a portion of buffer land, for example. Is that a possibility at all?

ANTONIO PANTALONE: Just on that point with regard to mine sites in North Queensland, it is something that we are currently discussing. We haven't actually moved ahead with trials as yet, but it is a very strong conversation that's being had.

The CHAIR: In terms of the research as well that I noted you had undertaken with UTS and Murdoch University, have any of the findings of that been made available, particularly in remediating coalmines or ash dams?

ANTONIO PANTALONE: With regard to Murdoch University, they've published a number of papers around this. They've done work with regard to rehabilitating an island—I can't remember the name—off Western Australia, and then there was some other work done specifically with mine sites and tailing dams, done within Western Australia. All their work so far that I've mentioned has been published within the scientific realm.

The CHAIR: In terms of the resilience, you talked about being able to build a house from hemp. I note in your submission you talk about them being tested to various international standards. How long do they last compared to traditional materials that we use to build homes now?

ANTONIO PANTALONE: Generally speaking as long, if not longer. In particular with regard to one of our technology suppliers, he recently ran a fire test with the CSIRO.

GARRY BOOTH: With CSIRO down at Bega.

ANTONIO PANTALONE: He ran a fire test where the walls, the external panels—and obviously it's using his IP around his formulation to build these panels. Each manufacturer will have their differences. So they ran a test where the external walls were heated to 1,000 degrees.

GARRY BOOTH: Fourteen hundred.

ANTONIO PANTALONE: Fourteen hundred degrees. They charred; they didn't lose any structural capacity. The internal wall, the temperature raised four degrees.

GARRY BOOTH: From 26 to 35.

ANTONIO PANTALONE: So about nine degrees.

GARRY BOOTH: That is over 45 minutes. They did have two steel bars on the outside of the house, plus two big hemp bars. The steel bars marginally twisted; the hemp bars remained intact. If you scrape them back you're back to, you know. They charred on the outside but they were structurally sound. It outperformed what the guy who is the scientist who put all this together, plus the CSIRO. It went way past their expectation of a home that is effectively fireproof. It didn't have windows, to be fair, because they wanted to test it. But it was fireproof.

ANTONIO PANTALONE: Just on that point with regard to the actual manufacturer, they are an existing business. So this is not theoretical; this is a company that's been in business in Australia for 12 to 15 years.

GARRY BOOTH: Yes. They are quite a large buyer of hemp from southern New South Wales and in Victoria. So this is one of the companies at the leading edge of production, and we have a strong relationship with them and with some others. I am probably going off the topic slightly, So that's why the infrastructure that we've seen so far in the Hunter Valley would be ideal for housing this.

The CHAIR: In terms of the costs associated with producing these sorts of construction materials, how do they compare?

GARRY BOOTH: Their manufacturer claims it's about half the cost of traditional materials. So it seems almost too good to be true—half the cost and more sustainable⁵.

The CHAIR: Yes, it does.

GARRY BOOTH: We saw the house that they built. So it's not the traditional round—you know, you've got the hempcrete houses. That's the low end of the—that's not what they do; it's quite high-tech stuff. We went to the University of Melbourne and discussed what we'd seen and what they'd done. They said they've worked for years trying to emulate what they'd done but couldn't do it. This is an all-Australian technology.

⁵ [Email from Dr Antonio Pantalone, Director, Advanced Simplicity, on behalf of Mr Garry Booth, providing clarification to evidence given at the public hearing on 5 August 2024](#)

ANTONIO PANTALONE: Just to add to that, so having seen the production process and understanding the relative simplicity—and again, it comes down to their own formulations and intellectual property—fundamentally the production process isn't overly difficult. Obviously I can't disclose what that is, but their biggest factor becomes the availability of hemp at the standard at which they want.

The CHAIR: Just for the Committee's information, there are examples of these industries that exist and that are manufacturing construction materials in New South Wales?

GARRY BOOTH: Yes, there are.

ANTONIO PANTALONE: Yes.

GARRY BOOTH: We could supply some of the materials for you to have a look at if you like, but it's to produce an industrial scale product that exceeds the recommended specifications and it's domestically produced at a price point below the imported like-type product.

The Hon. WES FANG: Has it been certified?

GARRY BOOTH: That's a good question. I think they must be because they are building them in—

ANTONIO PANTALONE: Actually, let's take that one on notice and I'll speak to the manufacturer. But the fact they're being sold on the Australian market would make me think that there is certification.

The Hon. WES FANG: The question that I've got is: If it delivers the performance that you say it does, first, I imagine it's been certified and, second, what is stopping its greater role other than your testimony that it's in fact the availability of hemp, I guess, to produce more of the product? I've got some queries as to how we've come to these conclusions.

ANTONIO PANTALONE: Fundamentally there are, what we see, as two barriers. The first one you've mentioned is availability—an availability of hemp; not just an availability of hemp but the availability to the specifications that that manufacturer will want. Secondly, it's a matter of market perception. Does the market accept panels made from hemp? We are slowly getting there.

The Hon. WES FANG: I imagine that the market would have no qualms about accepting a panel made from hemp, provided the figures you've outlined are demonstrable, certified, and repeatable. I think that's where I perhaps have some scepticism, given that if it's delivering the performance and benefits that you are indicating, then it seems remarkable.

ANTONIO PANTALONE: The material itself, traditionally, has always been incredibly unique. It's strong; it has a range of benefits. We don't have to talk about the history of hemp. Being able, with modern technology, to turn that into something that is reproduceable, as you said, with all these exemplary specifications and attributes, is not impossible, and is done. But when we talk about market acceptance—and I understand your point that if this product is so good why isn't everyone taking it—I'm saying, "Well, it's also a matter of getting the message across that it's made of hemp." There are still people who can't differentiate between hemp and marijuana. They are two distinct products, but there is still a market perception that, "Oh, hang on, if my wall is made of hemp, am I going to get high?" That is, sadly, the fact at the moment.

The Hon. WES FANG: Not for us. We have a very loud advocate in our Chamber who doesn't stop banging on about it.

The CHAIR: You mentioned the availability of hemp obviously being one of the limiting factors, or a large part of the limiting factors. In terms of what you are proposing, just so I have my head correctly around it, that would assist in addressing that part of the problem but also would require the use of infrastructure in order to maximise. It's no good having a giant hemp farm at the BHP Mount Arthur site; you'd need to have also the other processing and other capabilities in order to make that a viable exercise.

GARRY BOOTH: Correct.

ANTONIO PANTALONE: It would make it a viable exercise not only for the site itself but for the industry as a whole. The Hunter Valley is a really well-established hemp-growing part of New South Wales, and providing that infrastructure to offtake that hemp would be a great benefit to the existing farmers as well.

GARRY BOOTH: And to the local community, science and research—the whole lot.

The CHAIR: Thank you very much for making the time to give evidence to the inquiry today. Our Committee secretariat will be in touch with you with regard to questions that were taken on notice. That concludes our hearing for today.

(The witnesses withdrew.)

The Committee adjourned at 16:45.