PETROLEUM AND GEOTHERMAL ENERGY LEGISLATION AMENDMENT BILL 2013

Consideration in Detail

Resumed from 26 June.

Clause 7: Sections 6AA, 6AB and 6AC inserted —

Debate was adjourned after the clause had been partly considered.

Mr C.J. TALLENTIRE: I would appreciate the minister's explanation of proposed section 6AB, "Eligible GHG storage formation and related terms". Acknowledging that there is potential for the terminology to change and evolve as we better understand the geological nature of the various sites involved, is it wise to place in this legislation for a future act the definitions that are provided in these proposed sections? Would it not be better to place those definitions in some prescribed form now so that we can accommodate the evolving nature of our understanding in this area of geoscience?

Mr W.R. MARMION: What the member is saying is a bit of a contradiction. The member has talked about the evolving nature of geoscience. If we are too prescriptive now, it will make things more difficult in the future. Given that the geoscience is evolving, this will give us a bit more flexibility. Remember, this is only the framework. We need to make sure that the regulations and controls around this will fit under this legislation. If we get too prescriptive now, we might find in the future that we cannot do something unless we take the legislation back to Parliament to make it less prescriptive.

Mr C.J. TALLENTIRE: I thank the minister for that response. I think we are essentially in agreement. I am putting the point that perhaps we are in danger of already being too prescriptive and are not leaving options open. This relates to the concerns that were raised yesterday by the member for Murray–Wellington about the definition of "incidental greenhouse gas-related substance". Other members referred to the Intergovernmental Panel on Climate Change's definitions of greenhouse gas substances. We have also heard that, technically, more than six greenhouse gas substances are acknowledged under the Kyoto protocol. Therefore, a suite of greenhouse gas-related substances could eventually be listed here. I am seeking some reassurance about that further list of definitions, be it definitions relating to proposed section 6AB, "Eligible GHG storage formation and related terms", or definitions relating to proposed section 6AC, "Incidental greenhouse gas-related substance". There is a need for clarity about how those terms will be defined in regulation, and about the processes that will be undertaken to ensure that there is no concern about the nature of those chemicals. This refers to the discussion that we had yesterday about the potential for pollution of wells and aquifers and how that could impact on the livelihoods of dairy farmers in the south west. We need to ensure that there is a listing process for these substances and there is clarity about the definitions. We also need to know that there is scope for local community residents, such as the constituents in the electorate of the member for Murray–Wellington, to raise concerns about the nature of the substances that might be stored below their properties, hopefully in a very safe way, but that nonetheless might put their livelihoods at risk should there be a contamination event. So it is reasonable for us to seek clarity about this listing process, and also some elaboration on the scope for residents to make complaints and lodge appeals.

Mr W.R. MARMION: That is a good question to explore, and it is actually a question that I explored when I was briefed on the bill. It is true that the geoscience is evolving. I am advised that once the framework for the bill is in place, the regulations will not be drafted until an actual project has been established. The department will then use that first project to work out, hypothetically speaking, what the emissions will be. It will then specify, using its own expertise, and the work of the Environmental Protection Authority, what the safe incidental gases for that project will be. If we were to prescribe these things now, we might have a really good project that had a micro substance that we had not thought about and that had not been specified, and we would need to come back to Parliament to change the act. We do not want to specify something that we all agree is evolving. The people who drafted this bill have thought this through as best they can, and I think they have done a pretty good job and it would be unwise to specify.

Mr C.J. TALLENTIRE: I thank the minister for that response. We agree on the point that it would be unwise to specify. The question is the process that will be used for that future specifying and what complaint and appeal options will be available to the broader community, and also to non-government organisations, which no doubt will also be interested in this matter. People like the constituents in the electorate of the member for Murray–Wellington want to know that there will be a process by which they can hear about what is being proposed, and then seek information and challenge that information and have some right of appeal should a decision be made that is not suitable to them. Obviously a suite of environmental assessment processes are available to us. However, I am not clear from this legislation as proposed that we would be in a position to deal with the risks involved in sequestering a particular substance below the dairy farms in the Harvey–Waroona area through an

EPA assessment process. I am concerned about the means by which the assessment will be done. People need to be reassured that a rigorous, thorough and well-documented process is in place and that if a problem were to arise in some future prescription, they would have some way of challenging it.

Mr W.R. MARMION: It was remiss of me not to mention that any regulations that are made will need to come back to Parliament for scrutiny. Also, in addition to the things that the member mentioned about the EPA, the department will be putting out guidelines for public comment. Any regulations that are made would need to come back to Parliament to be approved. Therefore, Parliament would be given another say in those regulations. I think we have set up a pretty good framework for parliamentary scrutiny of the regulations.

Mr C.J. Tallentire: Will people be given the opportunity to appeal? That is the normal approach when it comes to environmental assessment. We are talking about the storage of substances that may be completely safe. However, some of those dairy farmers that the member for Murray–Wellington alluded to yesterday might feel that they need the rigour of a process that has an appeal phase so that they can test out what the risks are.

Mr W.R. MARMION: Once the Environmental Protection Authority looks at something, it is outside this process. The EPA is an independent body and its process happens anyway. This bill will put the framework in place and the regulations are just one aspect of what will come from this legislation. Those regulations, as is normally the case, might be more specific than the bill. We have this debate every time I stand up in Parliament; someone wants to talk about the detail that will be in regulations and whether they should be included in the bill, but that would result in a massive bill. With something like this, every time a regulation is changed, the bill would need to be amended, which could be every week. I am very confident that there are lots of checks and balances, appeal processes and consultation. After all that, the regulations, which will be more detailed, can come before both houses of Parliament. I am not saying that if they do come back to both houses of Parliament, they may not be changed again. At least the process will be a lot smoother if the regulations are brought before the house, where there is an opportunity for them to be disallowed, but we do not have to amend the act.

Mr C.J. TALLENTIRE: I thank the minister for that response. I am wondering whether specific reference should be made in this bill to the eventual assessment of substances that may be subject to an EPA assessment rather than putting that in regulation. Would it even be in regulation? It seems that the minister wants to leave it as just generally understood that a substance that might be deemed worthy of geosequestration storage could eventually be the subject of an EPA assessment. Is it really safe to not mention that that process is there? Should we not be outlining that from the outset and putting it in this bill or can I expect to see it in the regulations?

Mr W.R. MARMION: This bill will not override the EPA. Where do we stop? Do we put in all the other things such as Aboriginal heritage? Do we cross-reference every single possible thing in every single act? We are keeping the legislation specifically to geosequestration. The member probably knows even better than I how the EPA works and how an individual can suggest to the EPA that a project needs to be assessed and the EPA can make a judgement on it. If it thinks there is a possible risk to the environment, it can assess it just from a proponent's information. The EPA can choose to either not assess it or undertake a massive environmental public review. We are going off on a bit of a tangent. I am pretty confident our environmental assessment process, which is not my portfolio now, is a very rigorous process and, indeed, allows any individual to raise a project or a concern.

The member for Murray–Wellington, personally, or anyone in his area, can raise an environmental concern about a project in his electorate and the EPA can make a call on it. Both the proponent and the people concerned about what environmental issues might arise can make an appeal.

Mr M.J. COWPER: I refer to the incidental greenhouse gas section in clause 7 and the transmission of these gases from point A to point B. We teased out last night that there is the potential for a small amount of other non–greenhouse gas substances to be possibly transmitted through the pipes, if we like, across vast distances. We are talking about the South West Hub project to Kwinana, to Pinjarra, to Wagerup and to a location near Riverdale Road in Harvey, and another transmission line from Collie through to Perdaman, collecting Worsley on the way and meeting the pipeline coming from Kwinana. As has been teased out, there is a potential for some mineral and chemical remnant noxious materials to be transmitted along these lines. We also discovered that although they may be minute, they must be obviously within a certain specification. I do not want to get into the details of the specifications, but my question is: will the minister give an undertaking to Phil and Susan Hall of Hocart Road, who have a dairy farm and whose property will be affected by this legislation, that should there be a leak of noxious material onto their farm, the government will compensate them for it?

Mr W.R. MARMION: Under the current regime, I am very confident that before any gas goes into the pipe, it will be cleaned out—it will be predominantly CO_2 anyway. There is a provision in the legislation so that the liability will be with the company if any incidental gases—it could be a degree of a percentage, say, 0.0001, as I said, or even less—eventually lead to the gas in the pipe not necessarily being pure CO_2, although we have not

got to that yet. If, indeed, something happened, the company would be liable and would obviously have to pay compensation.

Mr M.J. COWPER: The problem, as I understand it, minister, is that if this proposal goes ahead, it will involve a billion-dollar investment from a number of companies, including BHP Billiton Ltd, Rio Tinto Australia, Worsley Alumina Pty Ltd, Griffin Coal and the like. Who will take responsibility? Will they form a separate company under the circumstances? I am of the understanding that when someone needs to put up their hand to sort out the problem, if it is not a sole trading company, it will be like "pass the parcel": "That's not our issue; this is a matter for Griffin Coal, because Griffin Coal has the arsenic coming out of its coal," or if some sort of sodium hydroxide is going through the process plant at Worsley or Alcoa, "They should pay; we never put the contamination in this particular pipeline." If there is incidental noxious material in that pipeline, whether it be mineral or chemical, how will we determine who pays? How will compensation be paid to Mr and Mrs Hall or Mr Paravacina or, for that matter, my good friend the member for Forrest, Nola Marino, and Charlie Marino, whose farm will be affected?

Mr W.R. MARMION: According to standard industry practice, if something escapes from a pipe that should not escape, whoever is responsible for building the pipe, or owns the pipe or is transporting the material will be personally liable. If it occurs through the injection, whoever is responsible for injecting it and did not inject it or seal it properly is liable. It is standard industry practice.

Mr M.J. COWPER: For argument's sake, let us say it is sodium hydroxide, which is used to extract alumina from bauxite, and a remnant is not captured in the liquor burners and somehow or another it gets into the pipeline; who will pay? Should Griffin Coal be responsible for the contamination in that pipeline or, if it comes from a different stream, should perhaps Alcoa be responsible? Obviously, there would be two pipelines in this case. How do we differentiate between who is causing the contamination, given so many people will be contributing to that pipeline?

For that matter, I would like the minister to perhaps explain it to the satisfaction of the landowners, including Hon Colin Holt, who owns land right where this project is currently underway. I am very sure Hon Colin Holt will be very interested in his answer.

Mr W.R. MARMION: The member for Murray–Wellington raised a number of points there, but is the member trying to explore who is responsible? I answered that last time. Then the member got into a hypothetical about sodium hydroxide fluid. We are talking hypotheticals—things that might happen years down the track—and the member is asking me some detailed questions. If I was the operator of the pipe who was responsible for it, I might set the standards for what goes into it before it goes in. I might not want any sodium hydroxide at all, so I might set the limit at absolute zero. That can be said for everything—any substance the member might want to talk about in this house that might be totally in the future and might not even exist. The Petroleum and Geothermal Energy Legislation Amendment Bill 2013 is set up so that if someone is going to transport CO_2 and geosequester it, and some incidental substances exist in that gas—whatever they may be—some regulations can be made to specify the limits. They could be specified as 0.000001 microns or two per cent or three per cent, depending on what it is. The Department of Mines and Petroleum, which will be overseeing this, will not specify something that is dangerous.

Mr M.J. Cowper: A bit like Varanus Island, is it?

Mr W.R. MARMION: What will be specified in the regulations will come back to the house, and both houses can have a say. The member, with his technical expertise, will then have the opportunity to say, "I think it shouldn't be two per cent; it should be one per cent, or 0.5 per cent or 0.000 microns."

Mr M.J. COWPER: Minister, should there be an unforeseen leakage and a determination has to be made of who was responsible, whether it be the carrier or the partners in that particular project, would the state ultimately underwrite any damages to the farmers whose livelihoods are affected? There could be court battles ad infinitum trying to resolve injurious affectation to farms. Would the state underwrite these matters?

Mr W.R. MARMION: I repeat again that the way liability is set up, the state will accept liability once we have done a closure certificate. The member is perhaps alluding to what will happen if the company runs out of assets. At the end of the day, the state would have to step in. That is the situation. But the way it is set up and the way I am confident it will work is that the only players in this game will be very substantial companies. So, in reality, if there was an issue, the responsibility would be with the proponent, not the state government. But if we get to the liability clause later today or next week or in a month's time, we will be able to explore that in more detail.

Mr P.C. TINLEY: It may be that we come back to this, as the minister said in his final sentence, when we get to the liability clause, to pick up on what the member for Murray–Wellington asked. The minister also made the comment that in his opinion this sort of activity—GHG storage—would be undertaken by only very substantial companies. But the minister has no guarantee of that, because, as we know, over time technology becomes more

and more streamlined and more and more repeatable. Therefore, we could end up with a range of companies of different sizes undertaking this sort of work. I am not saying that that would not be covered by this bill, but to pick up what the member for Murray–Wellington was talking about, which was who is responsible, we have a longstanding act in this state that covers bonding arrangements for resources projects to ensure that, should something go wrong, or indeed at the closure of the facility, substantive funds are available for the rehabilitation and reconstitution of the land. It strikes me as appropriate that there be an application of the same convention for this process. Could the minister speak to the idea of bonding; and, if so, at what level might that be?

Mr W.R. MARMION: Previously, and currently, bonds have been in place for mining companies and petroleum companies, but we are moving to a rehabilitation fund for mining. Petroleum, geothermal and GHG will be included as part of this new regime, so they will contribute to the rehabilitation fund that will be set up in place of bonds. The bonds we have in place are for rehabilitation works after demobilisation from the site has occurred. They are currently in place, but as of 1 July there will be the option for people to relinquish their bonds and go into a levy system.

Mr P.C. Tinley: By way of interjection, is that covered in this bill?

Mr W.R. MARMION: And the same will apply. Sorry; I have just been advised that it is not yet in, but it is being considered to be in the same situation. So, at the moment it applies for mining; they are covered by insurance, but we are looking at moving the insurance away and applying the same process as for mining. So, we are not looking at bonds; we are looking at moving petroleum and geothermal into the same regime as the mining industry so that they will actually pay a levy to cover any rehabilitation works.

Mr P.C. TINLEY: Given that that it is not covered in this bill or the regime we are in the process of passing through this house, I again pick up on the member for Murray–Wellington's point. What guarantees can we provide that the regime will ensure that landowners—let us face it, these sites are not necessarily large in space but there could be a disproportionate effect if something goes wrong—and multiple users of the land, not just the pastoralists but also the farmers and all the companies that undertake this work, have a proportionally large enough compensation arrangement to fix any problem that arises? My principal question, given that it is not covered in the bill, is: what risk assessment has been done around the likelihood of any minor or catastrophic failure?

Mr W.R. MARMION: We are jumping way ahead of ourselves. Let us get back to basics; I explained all this yesterday about 100 times. We have no legislation around geosequestration; okay?

Mr P.C. Tinley: Yes.

Mr W.R. MARMION: So the logic is either let us not have legislation, and try to get it done under the current rules we have in place, or have legislation to allow it to happen. That is what this is about. We are putting some legislation in place—a framework—so that CO_2 can be geosequestered into strata, such as aquifers, voids, sedimentary rock et cetera. That is the fundamental thing we are trying to do. We are trying to make sure that we do it so that there will be no problems; that is why the bill is pretty thick. Now we are all jumping to what will happen if there is a problem. This legislation, and all the regulations that will come afterwards, will ensure that there is not a problem. Obviously, we have to think about a problem occurring, and I will get there in a minute, but just bear in mind that we are putting 172 clauses into existing legislation so that we have a very strong, rigorous framework to make sure that every single bit of engineering technology, any new idea or any possibility of a leakage is covered. A lot of research, exploratory work, 3-D analysis and seismic work has been done to make sure that there will be an impermeable layer around where the CO_2 will be stored. That is what we are trying to do. Can we 100 per cent guarantee that nothing will happen? No, we cannot. The possibility that something may go wrong exists, and if that happens, it will have to be fixed and people compensated. I do not know what the member wants me to say. At the end of the day, the member for Murray–Wellington asked whether people will be compensated. If someone does not comply with the act and all the regulations and something goes wrong, they will be liable. We have said that, after the state signs off on the closure, which may be in many years' time, the state government will be liable. It is exactly the same process as we had for the geosequestration of the CO_2 on Barrow Island. The commonwealth and the state have agreed to be liable in the future if it does not work. That was the only way that that project would have got underway, because it would not have otherwise got financial security. The project backers would not have backed the project if there was indefinite liability. We have some legislation in place specifically for the geosequestration on Barrow Island.

We have decided that we will amend the Petroleum and Geothermal Energy Resources Act to cover the geosequestration of carbon dioxide, rather than putting in place specific legislation for every project that comes along, as we did with Barrow Island. There is a liability clause, which we will get to, and that means that the state will be liable. Indeed, there will be contingent liability. I do not know how it is worked out. The member's question is: what is the risk assessment? Risk assessments are done when someone puts in a program of works down the track. If there is a high risk, it will not get approved. If there is a low risk, the department might still

want to tighten up a whole lot of things to make sure that the risk is absolutely minimal. Some people might be able to write it off that they have guaranteed that it is. I do not know; that will be in the future. The South West Hub project is in its very early exploration stage, and we do not know whether it will be proven up. That is where we are at the moment.

Mr P.C. TINLEY: I thank the minister for that explanation. I do not want to waste the chamber's time if a lot of this stuff will be dealt with when we get to the liability clause. I want to make sure that I understood the minister's comments correctly. He sees that the Western Australian state government will go guarantor over the contingent liability of these projects.

Mr W.R. MARMION: I have just been advised that, without this legislation, there can be no further detailed assessment by the private sector, so the private sector will not play the game. If we do not have this legislation, we will not have any geosequestration projects.

Mr P.C. TINLEY: Notwithstanding that, every piece of legislation ought to at least contemplate as much as possible the consequences—the second and third-order effects—that it may create. Again, given the minister's previous statement, will the state now go guarantor for contingent liabilities beyond the life of a proponent's project? Given what the minister has just said, business, as we all know, enjoys certainty and the minister says that there will be no further investment in this area without something like this. But what we do not seem to be hearing from the minister is a more comprehensive response to what seem to be legitimate community fears about what will happen if it goes wrong. What has been contemplated in this headwork?

Mr W.R. MARMION: Once the project is completed down the track, insurance would cover the period until the state took up the liability.

Mr M.J. Cowper: Whose insurance?

Mr W.R. MARMION: The company's insurance, obviously.

Mr P.C. Tinley: Which you would determine in the viability of the proponent's proposal.

Mr W.R. MARMION: The proponent will have to have insurance to cover any contingent liability that it might have. After we have signed off on the closure plan and we are happy with it, in 15 years or more, the state will then take up the liability. I am pretty sure that proponents cannot get insurance forever. This is what I have been advised; I am not an insurance person.

Mr P.C. Tinley: You can get insurance for anything.

Mr W.R. MARMION: I have been told that private companies will not be able to get insurance for a project that goes for a thousand years. That is why we have this legislation. In fact, this is the only change made by the upper house to the previous legislation. The only change to the previous legislation is this liability clause, because parliamentary counsel decided that it should go in the legislation.

Mr P.C. Tinley: Yes; they correctly identified the problem.

Mr W.R. MARMION: They said that it should be in the legislation.

Mr M.J. COWPER: I asked a question previously of the minister about the transmission of greenhouse gas materials, and we explored the minute particles that might be transmitted. There are provisions for that in this bill, but I still have some concerns. Once this has been transmitted from point A to point B and is then pumped into the ground, will there be a cumulative effect by these minute particles, whether that be sodium hydroxide, arsenic or lead? The minister knows what happens in the alumina business. The bauxite is brought down the hill and it has to go through a process using sodium hydroxide and other materials to extract the organic and inorganic materials, and some of the minerals that are in bauxite are mildly radioactive. If these were to be somehow captured by the greenhouse gas liquid, or whatever form it might take, and were pumped into the ground, is there a possibility that there could be a cumulative effect of some nasty mineral or chemical potentially stored underground in one of these porous holding tanks? Should there be a leak under, say, Mr Ralph Maiolo's vegetable garden, which supplies most of the produce for Woolworths and Coles that the people of Perth eat, is there some safeguard for Mr Maiolo's trading enterprise on Finn Road and Old Coast Road?

Mr W.R. MARMION: One of the reasons that drilling has been done and cores have been taken is to assess the impact of the CO_2 on the part of the core where the CO_2 will go in—that is, the sedimentary layer. The chemistry of that sedimentary layer—the member knows all this—will be analysed to determine the impact of the chemical reactions to the material that goes in. Predominantly, it will be CO_2. If there are any other minute compounds or elements, they will be tested to see whether there is any reaction and to determine whether the cumulative effects over the many years of injecting CO_2 are significant, which I somewhat doubt, because if they are, it would not get approval. As the member for Willagee said, this gets down to risk assessment. It is a complex area. The risk

assessment can be done only when there is a project to look at, so it is pretty hard to talk about hypothetical chemicals and compounds. Those are the obvious fundamental things that are being looked at now before a proposal is put up. The exploratory stage to prove whether geosequestration in a certain geological formation is viable will cost millions of dollars and is a fundamental aspect that we take into account.

Mr M.J. COWPER: As the minister knows, I have been tracking this issue for a number of years. As a result, I have a delegate to the consultative committee, Mr Mike Whitehead, who has a background in environmental science and the hydrology of that area; I asked him to be my delegate on that consultative committee because, as I just mentioned, he has some background in this area and knows how to ask the questions. Some of the questions that he has been asking in that forum have not been answered, as the minister just detailed, because it is still a great unknown.

When this project first started in the South West Hub, as I mentioned yesterday, it was bordered by Riverdale Road, Government Road, Forestry Road and Old Coast Road. That has since become wider, going right out to the Darling Scarp. If members know the formation of the Darling Scarp and the Swan coastal plain, they would know that a fault line runs on the same trajectory as the Darling Scarp runs back into the plain. There is a fault there. We already know from our drilling at Riverdale Road on Alcoa's land that geosequestration has the potential to make this area porous up to a six-kilometre radius. If there is more than one injection, there is the potential for it to overlap and push into these faults that we already know exist, potentially even out into the ocean. As far as I am aware, we cannot carry out a seismic assessment on the land as we do in the sea. We are potentially looking at the cumulative effect of these incidental noxious chemicals. We are talking about incidental greenhouse gas, as set out in section 6A of the act. As I mentioned yesterday, the Lesueur aquifer is seven times saltier than the sea. We know that from the drilling. I am told that by pumping CO_2 into the ground, it will materialise into a solid format given the composition of the Lesueur aquifer and the nature of the chemical compound pumped into it. We still do not know what effect that will have on the composite if other incidental chemicals are in there as well. There is that potential.

I do not feel comfortable raising these issues now, but I have a responsibility to my electorate, which is my first and foremost consideration. I am hoping that we will get some answers on the Hansard record so we can get this legislation through in a format that will be comfortable for the people of Western Australia. I have probably asked the minister about 10 questions. I would like some comment on them.

Mr W.R. MARMION: The member made some comments, which are on the record. Some of them are not true. It is irrelevant, but I have been told that the salinity of the Lesueur aquifer is 50 000 parts per million. I have not tasted it and I have not gone down and measured it.

Mr P.C. Tinley: Why not?

Mr W.R. MARMION: It is too far down; I cannot fit down the hole. The salinity of the Lesueur aquifer is only about double that of seawater. That is irrelevant.

This bill is not about a specific project; it is about all geosequestration projects. The member has raised concerns about a particular project. It is only in the exploratory stage. If there are specific things that the member does not think he is being consulted on properly as we go forward in the project—we have only just put our toe in the water—I am happy for him and his expert adviser to talk to officers from my department about the specific technical issues that he has a problem with. We are a long way from it being a project. The member's expert adviser can have input all the way along. It may turn out that the Lesueur aquifer has an impermeable layer around it and it can be contained. That is what we are doing now. If it cannot and if there are issues, it will not get the tick-off. We are not there yet.

Mr M.J. COWPER: The concern is that this is new technology. As I mentioned in my speech on the second reading, we have two examples of where geosequestration is operating—that is, in the north west of the United States and in the Scandinavian oilfields in the North Sea or somewhere in that area. It is operating with some success. If this process can be shored up, it will probably be the best thing since sliced bread. I am concerned that we are picking a formation in arguably the premier food-producing area of Western Australia. That is not to say that other electorates do not have great food-producing areas. I am saying that Harvey Fresh and Harvey Beef are iconic brands. We are playing with fire on technology that is still in its infancy. I would be a lot more comfortable knowing that this testing will be done somewhere in the Canning Basin or somewhere where it would not have the potential for such impact. It might sound a little like "not in my backyard" syndrome.

Mr P.C. Tinley: The member for Kimberley just raised her eyebrows pretty high.

Mr M.J. COWPER: Absolutely. I understand why she would be concerned. The minister is making a potential mess of a very important food source for the people of Western Australia. It is new technology.

Mr W.R. MARMION: I take the member's comment on board. I reiterate that we are only exploring the possibility of releasing some acreage. It may not be released at all after all the work we will do. That is where we are at. We cannot determine whether there is a possibility of a storage site for geosequestration until we do some exploration. I know that the member would rather no exploration was carried out in that area, but apparently it has been going on for many years. We are not there yet. If it proves that it is not safe or if it obviously affects another industry, the Environmental Protection Authority will look at that and voice its concerns—just like the EPA had concerns about coalmining at Margaret River due to interaction with an aquifer. We are a long way away from that. All we are doing now is determining whether the Lesueur aquifer is suitable for geosequestration. The next process would be to put out some acreage for the private sector, and then someone has to say whether they are interested. There is a long way to go. I take the member's comments on board.

Mr M.J. COWPER: I am interested to follow on from the comment made by the minister about the proposal to mine Margaret River. I am not quite sure what he means by that. Does he think it is important to ensure that our wine industry is protected or is it less important that we look after our dairy industry, our food producers, our vegetable growers and the like?

Mr W.R. MARMION: Sorry; what was the question?

Mr M.J. COWPER: I want to tease out the comments the minister made about the proposed coalmining in Margaret River. Is the minister saying that the wine industry and the tourism industry are more important than the dairy farmers and the producers who supply milk, beef and vegetables and all the other activities that operate on that irrigated farmland?

Mr W.R. MARMION: I said nothing of the sort. I would like to know which part of the bill the member is referring to.

Mr M.J. COWPER: I was simply referring to the comment made by the minister during his speech. He said that the government would protect certain areas of the south west over others. I just wanted him to explain a bit more in depth why Margaret River is more important than Harvey.

Mr W.R. MARMION: I think it is irrelevant. I did not make any comment of the sort; I was just giving an example of how the Environmental Protection Authority would assess them. It has nothing to do with me. The EPA is an independent body.

Mr C.J. TALLENTIRE: I have just one more question on this clause that relates to some comments the minister made yesterday during the consideration in detail stage when he ruled out certain gases from geosequestration. If I understood the minister correctly, I think he said that nitrous oxide, sulphur dioxide and sulphur trioxide would be ruled out from geosequestration projects. Can the minister please clarify that?

Mr W.R. MARMION: Nitrous oxide, sulphur dioxide and the various oxides and trioxides have to be removed. We do not want them in the ground. I do not know how well they can be extracted, but if there is a minute amount of sulphur dioxide or nitrous oxide, I do not know. That will be covered. We do not want them down there. The aim will be to have them removed. There is no intention of having those gases geosequestered.

Clause put and passed.

Clause 8: Section 7AA amended —

Mr C.J. TALLENTIRE: Clause 8 presents as a fairly benign clause. It outlines an amendment to section 7AA of the act. That does not seem too serious, but when one looks at the principal act and realises that section 7AA refers to the disapplication of state occupational safety and health laws, it raises concerns. The current act somehow allows for the disapplication of state occupational safety and health laws to petroleum operations and geothermal energy operations. I seek the minister's explanation of this. There might be some explanation, such as that it relates to federal laws covering these things; I am not entirely clear. It seems that under this clause we are seeking to ensure that greenhouse gas operations would be similarly removed from any coverage that the state's occupational safety and health laws would provide to workers who are working on these projects. I am concerned about this. I can imagine that in an offshore situation the minister might be able to argue that there is coverage by federal legislation, but we are not talking about that here. We are talking about a new technology—one that will be using all sorts of high-pressure injection techniques—and we are saying that we are not going to allow the state's occupational safety and health laws to apply. I am concerned about this. I am also concerned about the way in which this has been presented to the house. The amendment bill before us gives no hint of the potential gravity of what is at stake here. That is an issue in itself. I seek the minister's explanation and justification for having greenhouse gas and carbon geosequestration operations exempted from our health and safety laws.

Mr W.R. MARMION: They are not exempt. The Mines Safety and Inspection Act 1994 contains a health and safety regime, which members would probably be aware of. That is separate from the general occupational

health and safety legislation, which is why petroleum and geothermal operations are excluded from that legislation. Mining has its own rigorous standards. It is very detailed. It is our intention that the greenhouse gas operations will be covered by the rigorous occupational health and safety regulations under our Mining Act. All we are doing is being consistent so that greenhouse gas operations will be covered by the same rigorous occupational health and safety regulations as the petroleum and geothermal industries. This is really just making sure that the greenhouse gas operators are covered in exactly the same way as petroleum and geothermal energy operators, especially as it may involve the same companies.

Mr P.C. TINLEY: Thanks for that, minister. Just to tease out that answer, I understand that this provides an exclusion from a body of law in relation to workers on these projects. Can the minister contemplate a circumstance in which that would be provided?

Mr W.R. MARMION: No. Those who know the mining industry well know that it has its own occupational health and safety legislation. This amendment will exclude greenhouse gas operators from the general occupational health and safety legislation, as petroleum and geothermal energy operators are already excluded.

Mr P.C. Tinley: But they are obligated under the mines OHS?

Mr W.R. MARMION: They will be, yes—no-one escapes. To digress, there is an issue about whether the legislation should be combined. Basically, for those who do not know, there are two occupational health and safety acts. One covers the mining industry and one covers everybody else. From time to time there is debate about whether these matters should be covered by the same act. I think that is going on at the moment.

Mr D.J. KELLY: I want to follow up on that point. The minister's answer to that question was as though it is a minor issue. There is a lot of debate from time to time about the value of having the mining industry covered by separate occupational health and safety legislation. My question is: is the exclusion that is being given to greenhouse gas storage operators under this bill being done almost as a casual consequence of the amendment to the act or was there detailed consideration of, and in particular consultation on—for example, with unions or UnionsWA—whether it is desirable to have this new operation exempted from the occupational health and safety legislation that covers most workers in Western Australia?

Mr W.R. MARMION: I have been advised that mining and petroleum have separate acts. When it comes to petroleum, it is covered under another act, not the Mining Act. I misled the member by stating it was the Mining Act; it is actually under the petroleum act. Extensive work has been done. The same safety requirements that are provided for in the petroleum and geothermal act are the same sort of issues around geosequestration. It makes sense for the same trained inspectors in a highly specialised area to be under this regime. Other people from WorkSafe who do not have those skills will not be involved. The government has the regime in place; this matter ideally sits in exactly the same regime. The same engineering expertise and skills required to do petroleum and geothermal drilling are required with geosequestration drilling. It makes good sense to use the same skilled people who are trained in the safety requirements of those quite dangerous operations.

Mr D.J. KELLY: I want to make sure I understand the minister's answer. His previous answer that these operations will be covered by the mines act is not correct. Could the minister just clarify which legislative occupational health and safety arrangements will apply to these operations? Given the quite serious implications of which occupational health and safety legislation applies should there be an accident, what consultation took place with stakeholders, such as the unions likely to have coverage of this industry; and, secondly, was UnionsWA consulted when, as the minister said, extensive work was done?

Mr W.R. MARMION: The act that the occupational health and safety regime is under, which covers the petroleum and geothermal industry, is the Petroleum and Geothermal Energy Resources Act 1967. The act has its own occupational health and safety regime, including safety case regimes for projects. We have covered the exact same situation. Consultation was not required with the unions because we were carrying the same regime. I am sure they would support it.

Mr D.J. KELLY: I am sorry, minister, but I am not familiar with the occupational health and safety legislation that applies to the general population. I am also not familiar with the occupational health and safety provisions that apply under the act the minister just cited. Can the minister point out to me what the differences are between the general occupational health and safety legislation that applies to most workers in Western Australia and the occupational health and safety legislation that will apply under these greenhouse gas storage operations should this bill be passed?

Mr W.R. MARMION: There are a lot of similarities with the occupational health and safety for general industry, but the other is far more specific to mining and petroleum—that is the difference. Although they are generally pretty similar, it goes a little further into safety cases and specific issues dealing with the mining, geothermal and petroleum industry in this particular case.

Mr D.J. KELLY: The minister's answer just given in some ways confirms my fears—that is, the government has adopted this alternative regime because that is the regime that applied to other operations under the act that we are amending, as opposed to the government having given active consideration to whether the regime that applied under this act being amended is the most appropriate. The minister's earlier comment that the unions were not consulted yet he is sure they would support it seems to be incredibly inadequate. These operations are complex; they are dangerous. I seek some assurance that the government has actively considered whether this regime is the appropriate occupational health and safety regime that should apply in this new industry.

Mr W.R. MARMION: The answer is obviously yes. A regime is already in place that is almost identical; it looks after petroleum and geothermal, which is drilling into the ground. This is the legislation that looks after the petroleum and geothermal industry. We are amending this legislation to put in greenhouse gas issues. Why would you not do it? I think the department has done the right thing; Parliamentary Counsel has done the right thing. It is eminently logical that if a regime is in place that is highly technical, it be used.

Mr P.C. TINLEY: To pick up from what the member for Bassendean said, and maybe reverse it, the entire amendment to the act has been predicated by the fact, by the minister's own words, that this is new and unproven technology in various forms. As proven in different ways —

Mr W.R. Marmion: In some of the details —

Mr P.C. TINLEY: But I refer to its aggregate form and the way we want to apply it.

Mr W.R. Marmion: Every time you drill an oil well, there is uncertainty down the bottom.

Mr P.C. TINLEY: Sure. But the sequestration pieces and the cumulative effect of all those pieces of operation that we cannot really know about are now being put in place; hence, the obvious requirement to amend our current laws.

Mr W.R. Marmion: Correct.

Mr P.C. TINLEY: To pick up from what the member for Bassendean said, in the minister's consultation and in the department's deliberations, was anything in the occupational health and safety standards or risks seen as unique to this particular operation of geosequestration?

Mr W.R. MARMION: My advice is that it is almost identical. Everything above the pipe, the drilling, is identical to petroleum and geothermal drilling. My advisers say that they cannot think of anything that is not —

Mr P.C. Tinley: No. I was not asking about whether they were happy. I was asking what consultation was undertaken; what deliberative study in risk management assessments or risk analysis was done that satisfied the department that all it needed to do was to fold this into the existing act.

Mr W.R. MARMION: The process is exactly the same.

Mr P.C. Tinley: No; I am sorry. I am not talking about —

Mr W.R. MARMION: Why would there be any analysis when it is exactly the same? Petroleum and geothermal drilling require the same people. The same rig comes along and drills a geosequestration hole. I am assuming there has been consultation with the industry, its developers and proponents and that there are not problems there.

Mr D.J. KELLY: Division 3 of schedule 1 of the Petroleum and Geothermal Energy Resources Act 1967 sets out the selection process and the training obligations and, importantly, the procedures for disqualifying health and safety representatives and, importantly, the powers. Are those provisions the same as the selection processes and powers and training requirements for health and safety representatives under the general legislation that applies? In particular, what are the differences?

Mr W.R. MARMION: My advisers cannot give a line-by-line analysis right now, but they have said that when the schedule was developed, it was done line by line and developed with that in mind. They are very similar but this clause goes into more detailed particulars to do with drilling.

Mr D.J. KELLY: I am sorry; perhaps I have misunderstood. Forgive me for being a new member. I cannot see that the schedule that outlines the training and powers of occupational health and safety representatives under the substantive legislation has changed. Those provisions have just been adopted for this new operation. I am not asking what the changes are; I am asking whether there are any differences between the rights, obligations and training requirements for occupational health and safety representatives under the general legislation and under the Petroleum and Geothermal Energy Resources Act 1967 that will apply in this industry. I cannot see that they are being amended by this bill; they are just being adopted.

Mr W.R. MARMION: I seek a point of clarification. My advisers have not picked this up, but I think the member for Bassendean seeks not the differences between greenhouse gas operations and petroleum, but the differences between the Petroleum and Geothermal Energy Resources Act and the general Occupational Safety and Health Act. I make that clarification so that I can get an answer for him.

Mr D.J. Kelly: Yes.

Mr W.R. MARMION: Now I will get the answer to that.

Mr P.C. TINLEY: I am particularly keen to hear what the minister has to say in reply to the member for Bassendean's question.

Mr W.R. MARMION: I am advised there is no difference between the training requirements under either act, except that, under the Petroleum and Geothermal Energy Resources Act, specific certificates are needed for specific areas; so it goes further. I am not an expert in the other act, and that is not being discussed here, but other certificates in other areas may be needed as well. Generally, training requirements are the same, but in mining, certain certificates are required for specific tasks related to the petroleum industry.

Ms S.F. McGURK: I also want to know what occupational health and safety consultation with unions or peak bodies is provided for in the mining legislation, so that they can provide assurances on whether the processes are exactly the same and whether any other considerations need to be taken into account for occupational health and safety issues.

Mr W.R. MARMION: When this legislation is passed, all the regulations will have to change. So the occupational health and safety regulations relating to safety cases, the petroleum legislation and indeed these will have to be changed, and that will have to go out for consultation. The unions will have the opportunity to be consulted when the regulations are changed.

Mr D.J. KELLY: One of the tools that occupational health and safety representatives have at their disposal in any industry is provisional improvement notices. I am anxious to hear that, in the absence of the amendment we are dealing with, the general occupational health and safety legislation would apply. This amendment will mean that the provisions under the Petroleum and Geothermal Energy Resources Act will apply. That will provide for provisional improvement notices, but I seek assurance on the provision here. What are the differences? I certainly do not want to hear that the PIN provisions are weaker than would otherwise apply.

Mr W.R. MARMION: They are definitely not weaker. What else did the member want to know?

Mr D.J. KELLY: What are the differences? That is a key point. Once I know the differences, an assessment can be made about whether they are weaker.

Mr W.R. MARMION: I will have to get the expert in that area to give the member for Bassendean a personal briefing. I do not have the expertise today to go through that level of detail. As the member said, all that is being done in this clause is making sure that the greenhouse gas safety provisions will be covered under the Petroleum and Geothermal Energy Resources Act rather than the Occupational Safety and Health Act. The main provisions, which we might get to later on and which are not being amended, are the contents of clauses 36, 37 and 38; that is, clause 36, "Provisional improvement notices" on page 294; clause 37, "Effect of provisional improvement notice" on page 295; and clause 38, "Duties of operator and other employers in relation to safety and health representatives" on page 296. I have been advised they are not in the bill, but they are in the current legislation.

Mr D.J. KELLY: I understand that, but what are the differences? In the absence of this amendment, the general provisions would apply, so this amendment means these provisions apply, and I feel duty bound to ask what the differences are. If the minister does not have the expertise now to answer that question, it does raise a concern for me that, in the preparation of this bill, the issue of occupational health and safety is being given less detailed consideration than it should be, and the government has just ticked it off and said that everything else is covered by the provisions under the act so we will just flow it on. I am not sure that is good enough

Mr W.R. MARMION: That is totally wrong. That is like saying the government does not give any consideration to the people in the current petroleum and geothermal industry. It has a lot of consideration for them and that is the reason for this bill. The government is making sure that the people who get involved in the greenhouse gas geosequestration industry have the same strong safety provisions that the petroleum and geothermal people currently have. So it is quite the opposite. It is a very strong, safe bill. If the member wants to go through that act, I am happy to provide a briefing and if he has any concerns, we can make some amendments to make it even stronger. But that is not in the bill being discussed today.

Clause put and passed.

Clause 9: Section 9 amended —

Mr C.J. TALLENTIRE: Clause 9 seeks to change the heading of section 9 so that it will read —

Certain resources and formations declared to be property of Crown

This will replace the heading of section 9 in the act, which is —

Petroleum, geothermal energy resources and geothermal energy declared to be property of Crown

I am concerned by this difference in the headings. We are merging things and mixing things up too much. On the one hand we are saying that things we might want to extract, such as petroleum and geothermal energy sources, are property of the Crown, but on the other hand we are adding that the geological formations, where we can store carbon dioxide, are property of the Crown. This relates to liability matters. I cannot foresee a circumstance in which a petroleum or geothermal energy source would become a liability, but what if a formation, which we have said belongs to the Crown, is found to be faulty in its capacity to sequester greenhouse gases? If that formation is defective, does that imply that the Crown then becomes liable for its failure? I think the situation might be analogous to a rented house. Should the roof leak in that home, is the tenant, the occupier of that space, responsible for fixing the leak, or does the property owner have to take responsibility for that leak? The danger right the way through this legislation is that we are mixing up things. I know it is convenient to use the existing petroleum legislation for our geosequestration plan. However, although it is convenient, I think it also is perhaps dangerous because we are talking about quite different things. One is a whole area of legislation that is about accessing resources for extraction and use, but in this case we are talking about accessing areas for the storage of a waste. That is where I think we do get ourselves into some danger, and in this clause it goes back to the liability issue.

Further to all that, when I first read this clause, I thought, "We're stating the obvious; of course, those petroleum and geothermal energy resources belong to the Crown. Does that even need to be stated?" But I can see why. It is there and that is why I seek clarification on those points.

Mr W.R. MARMION: The reason clause 9 exists is to make it quite clear. We are not amending the bit about the petroleum and geothermal energy resources; that is how it exists at the moment. We are adding that the Crown also owns the greenhouse gas cavity. The reason that we want the Crown to own the storage formations is that we can do the same thing as we do with petroleum and geothermal energy resources—that is, allocate rights to explore. Parliamentary Counsel's Office has advised the way to go and it has been doing it successfully for 100 years. This clause makes it quite clear that the GHG storage formation is owned by the Crown, which then has the right to allocate the rights to explore.

Mr C.J. TALLENTIRE: I think that goes some way to clarifying things, but I will just pick up on the final dimension—namely, the constitutional implications of this statement. My understanding is that the mineral wealth of the state belongs to the people of Western Australia. By using the term "Crown", is the government broadening that to include all Australians?

Mr W.R. MARMION: This is an act of Western Australia, so the Crown is, in this case, Western Australians.

Mr M.J. COWPER: I am about to tee off from the point the member for Gosnells made about particular titles. Prior to the federation of Western Australia, there were Queen Victoria titles across certain parts of Western Australia—the Swan Valley in the member for Swan Hills' electorate; Moora in the member for Moore's electorate; York and Beverley, some of the oldest towns in Western Australia, in the member for Central Wheatbelt's electorate; and also Pinjarra, the fourth-oldest municipality in Western Australia. Areas of land between Pinjarra and Bunbury are subject to Queen Victoria titles. For those who do not know, the Queen Victoria titles —

A government member interjected.

Mr M.J. COWPER: Capel is another such area, which is in the member for Collie–Preston's electorate.

For people who do not know, Queen Victoria titles pre-date Federation, so they are a bit different from other titles. The minerals and formations under those Queen Victoria titles belong to the landowner. I know that there are some Queen Victoria titles in and around Waroona. I am not sure—I have not actually explored this aspect yet—whether any of the South West CO_2 Geosequestration Hub project falls under these Queen Victoria titles, but if it does, it throws up a whole lot of complex issues in relation to this legislation. When the Crown designates an injection site or a storage site, it then becomes the property of the Crown. As the member for Gosnells stated, I understood that all the resources of Western Australia, whether it be water, mineral wealth or the air we breathe, belong to the people of Western Australia. But in certain circumstances, such as Queen Victoria titles, that is not so. I am very interested to know how that relationship would figure for, let us say, the beautiful Swan Valley where beautiful wine is made, which, given that it grows grapes for wine, probably will not be subject to an application. However, Harvey certainly falls within that consideration and also

the areas around Moora, Beverley, Northam and Capel that have Queen Victoria titles, so I am very interested to know whether this clause has some implication for that.

Mr W.R. MARMION: I am semi-familiar with Queen Victoria titles, which change the ownership of minerals, but that does not apply to petroleum and geothermal resources. Clause 9 of the bill and section 9 in the act, which mention petroleum and geothermal resources, do not apply to Queen Victoria titles. The ownership is with the Crown, not with the people who have Queen Victoria titles. It is not subject to this legislation, but there are some technicalities around minerals. However, we are not dealing with mining; this legislation is to do with geosequestration and the rules that will be applied are the same as for petroleum and geothermal resources, which means that the Crown will own those assets.

Mr M.J. COWPER: I have a point of clarification. Mr Elliott who lives in North Dandalup has a Queen Victoria title and next door there was an application for a sand extraction licence by a company called Matilda Zircon, which circumvented the Mining Act by seeking a sand extraction licence. The reason that it can do that is those minerals that belong to people such as the Thorpes, the Emmanuels and so on will be sold directly to the company and as a result no royalty is paid to the state. Those operations that will utilise our roads and ports circumvent the Mining Act because they sit on a Queen Victoria title. It is an anomaly within the system and a matter that I took up vigorously with the minister's predecessor. I am very disappointed that, notwithstanding the protestations of the shires and all the people who live in that area, approval has been given under a sand extraction licence. But I think that is something we can discuss a bit later. I seek clarification that petroleum that might sit under land that is owned under a Queen Victoria title does not belong to the people who own that land. For instance, there are oil and gas deposits in the electorate of the member for Moore, around Eneabba, Gingin and Moora. If a large landowner in that area were to find some petroleum on his land, is it correct that he would not be entitled to that resource?

Mr W.R. MARMION: I am not sure of the history. I think it is because of the importance of petroleum to the security of this state. I am advised that petroleum has always been owned by the Crown. A person who has a Queen Victoria title cannot say that the petroleum is his. Petroleum and geothermal are owned by the Crown, and we are now adding greenhouse gas. A Queen Victoria title cannot override that. But I understand the member's point.

Mr M.J. Cowper: The minister has touched on a very good point. The minister is saying that the need to secure petroleum for the benefit of the state is paramount. I understand that. Natural gas would probably fall into that same category, and so could thermal energy, potentially. But how can CO_2 that is injected into the ground have the same status as petroleum? I do not see how the same argument could apply to that.

Mr W.R. MARMION: That is why we have brought in this bill. We are saying that it has significance for the state, and that is why it is owned by the Crown.

Mr M.J. COWPER: Subsequent to these proceedings, I will investigate exactly how many Queen Victoria titles there are in that area, because to me this is somewhat unjust. I can understand the reason for petroleum to be exempt. But carbon capture, or the geosequestration of a waste material, is not an asset to the state, nor is it fundamental to the people who own that land. There is no benefit whatsoever to those people from having this done on their land, notwithstanding the fact that it is a Queen Victoria title.

Mr W.R. MARMION: We are talking about a storage formation that could be two or three kilometres below the ground.

Mr M.J. Cowper: It goes up and it goes down.

Mr W.R. MARMION: It may not at all. The purpose of this bill is to put in place a regime to ensure that it goes down and stays down. The member might have the view that it is not as significant as petroleum or geothermal; other people have a different view. As I said yesterday in my second reading response, areas such as Collie might want to have more industry. But we do not want to have a high level of CO_2 emissions. We can therefore sequester those emissions in some way, and this is one of those ways.

Mr M.J. Cowper: You are not going to get rid of it. All you are doing is putting it under the carpet.

Mr W.R. MARMION: Yes, but it is not going into the atmosphere. That is why we are doing this. The state believes it should be an asset of the Crown rather than of an individual. That is the reason for this clause.

Mr D.J. KELLY: Under the original provision, petroleum and geothermal energy are declared to be the property of the Crown. We might not be able to hold those things in our hand, but they are real objects. Under this amendment, potential GHG storage formations and potential GHG injection sites are also declared the property of the Crown. I am curious to know how we can legally declare as property of the Crown something that does not exist and is not a real asset but is only a potential. Has that been considered?

Mr W.R. MARMION: This clause has been placed in the bill so that we can allocate exploration rights. If we do not have a potential site, we cannot allocate an exploration right. That is how the process will work, and that is why it has been worded in this way. That is the advice we have been given by parliamentary counsel.

Mr D.J. KELLY: I understand what the minister is trying to do. But I am still unsure about how the minister can declare as property of the Crown something that is only a potential. I can understand that an actual GHG storage site would be the property of the Crown. But it seems extraordinary that something that is only a potential would also be the property of the Crown. I am not aware of anything similar that has been done elsewhere.

Mr W.R. MARMION: If the Crown does not have control of a potential site, it cannot issue an exploration permit. This is the mechanism that will enable that to be done. The site will then need to be trialled to see whether it is an actual. But we need to have control of the potential before we can get an actual. If we do not have control of the potential, we cannot issue an exploration permit; and we cannot determine whether it is an actual until we have done the exploration. So it is a bit of a catch-22 situation. But all we can deal with at this stage is the potential.

Mr D.J. KELLY: I understand that we need to have a process. I am just wondering about the legality of declaring something that does not exist as property of the Crown. I am concerned that if in future we had to litigate whether a person had stolen property of the Crown, we would need to litigate what a potential site is. If someone took petroleum from the ground and we sought to prosecute them, it would be pretty straightforward to prove that that was theft of Crown property. But in this case, the minister is seeking to declare as property of the Crown something that is only a potential. If a person were to damage or steal a potential site, we would need to go to court and litigate it. I am questioning whether it is appropriate for the government to declare as property of the Crown something that does not exist and is only a theoretical concept. Has that point been considered by the government?

Mr W.R. MARMION: I think it is reasonably logical that it is defined as a potential. It exists. Just because it is a potential, it is not something we cannot grab hold of and point to or show in a three-dimensional model. The potential might be a certain size, but when it is proved up, it might be smaller, so we are saying, "Here's a potential greenhouse gas formation; off you go, we'll release the exploration permit." It may be that after the proponent has done a lot of exploration, it is not as big as that; it might even be a bit bigger. It could be that the area defined as the GHG storage zone might be smaller. Some preliminary work will have been done before it is released. The terminology of a "potential GHG storage formation" is tangible because there it is; it can be drawn up and plotted. It is under the ground, but it is tangible. If someone put their hand down there, they could grab hold of it. Someone could certainly see it on a computer screen.

Mr D.J. KELLY: Maybe I could come at this from a slightly different way. Is there a definition in the legislation for a potential site? Maybe the minister can take me to that.

Mr W.R. MARMION: We dealt with that in clause 6. There is a definition; I do not want to go there again.

Mr M.J. COWPER: If, once the material is sequestrated, it becomes the property of the Crown, in the unlikely event it were to escape through a fissure or through some fault and materialised on, let us say, Mr Brown's dairy farm, who would own the material?

Mr W.R. MARMION: This goes back to the liability issue again. The Crown owns the formation and the proponent uses the formation for the storage. It is the proponent's responsibility; they own it. When it comes to eventual sign-off 15 years later, or whenever it is, it will be our responsibility because we own the formation. If the proponent has signed off and has gone—we will get to that clause—by default, it will be owned by us.

Mr M.J. COWPER: Once the material is pumped into the aquifer or the storage unit or whatever we want to call it, which is owned by the state, and after the proponents have finished their operation, there is a sign-off and I understand at that point, the contents of that reservoir will be owned by the state.

Mr W.R. Marmion: Yes.

Mr M.J. COWPER: If that material were to permeate out of that storage facility and manifest itself in Mr Brown's dairy, who will own the material?

Mr W.R. MARMION: It is not so much a matter of the ownership. The member is asking who will be liable if there is some detrimental effect after it has been signed off.

Mr M.J. Cowper: I did not ask about liability. Who will own the material?

Mr W.R. MARMION: Mr Acting Speaker —

The ACTING SPEAKER (Mr I.C. Blayney): I need someone else to stand up before the minister can speak, please.

Mr M.J. COWPER: I am very eager to hear from the minister on this particular question.

Mr W.R. MARMION: I am advised that the bill is silent on the ownership. It does not refer to the ownership of the material. The bill goes only to the liability of any consequences of the material escaping. The advice I have at the table is that in the bill, the ownership is void.

Mr M.J. COWPER: Let us say for argument's sake that farmer Jed Clampett goes out to his irrigated paddock one morning and up comes this bubbling crude on his automated, carbonated dairy farm. Who will own it?

Mr W.R. MARMION: If it is owned by the proponent —

Mr M.J. Cowper: He signed off on it.

Mr W.R. MARMION: — until it is signed off, I guess it is still owned by the proponent, but the proponent has no liability after liability reverts to the state after 15 or 20 years.

Mr M.J. COWPER: Has the potential for such matters been discussed with the Minister for Health? Are the people of Western Australia comfortable in the knowledge that their milk will be produced on potentially irrigated and carbonated farmland? Are there health implications from that? Is it palatable to the consumers of Western Australia?

Mr W.R. MARMION: That is why we are putting this legislation in place. We are geosequestering CO_2 two or three kilometres below farmland. We want to make sure nothing will get out of that. We think it is a good idea to geosequester CO_2 if it can be done. It has been done in only a few places around the world. At the moment, as in the member's electorate, some exploratory work is being done. Although he is flagging concern of a disaster happening, we are a long way from that. In fact, as I said before—I keep saying the same thing—we do not even know whether it will be proved up. There is a risk assessment around that, and in case a situation arises, which we hope will never happen, the legislation contains provision for the state to be liable. While the material that is in the ground, which we assume will stay there forever, is owned by the proponent, the proponent will have liability for it. If there is a consequential problem afterwards, the state will pick up the liability.

This legislation will be in place to make sure there is rigour around the exploration, the analysis or the trials so that before a potential formation becomes an actual formation, proper plans are in place, with lots of engineering design and a certainty that it will perform such that there will be no leakage.

Mr M.J. COWPER: If the proponents have signed off from the sequestration, and the contents of the underground reservoir, which will belong to the Crown—let us say that it is a full bladder of CO_2—escape from that formation, whether it be laterally or horizontally, who will own it? Once it escapes from the reservoir, will it no longer be owned by the state, even though it has escaped? It will be like a dog, which is still the owner's dog even if it is running down the street; it has to be retrieved and put back into the backyard and tethered to a tree or something. But if there is an escape of this material and it permeates to the surface, is it no longer in the ownership of the Crown if it goes into the atmosphere, for instance? Once it comes out of the ground, escapes the confines of the soil and goes into the atmosphere, whose is it then?

Mr W.R. MARMION: I think we have to go through the process in a bit of detail to cover the member's question. Let us say, hypothetically, that the department has ticked it off and we actually have a confirmed formation for storage. As with any project—this will probably be looked at in more detail than any other project—requirements will exist around the operation of the project. Monitoring will take place, and obligations will be placed on and undertaken by the proponent that there will be no leakage. We will monitor around the containment area, and if, during the period the formation is being used to store, any leakage is detected —

Mr M.J. Cowper: Are you going to have canaries or something in birdcages?

Mr W.R. MARMION: Can I carry on? I am just trying to answer the question; I have not finished. There will not be canaries; there will be proper monitoring equipment.

Let us say the storage time is 40 years, and if at any time during that 40 years a leakage is detected, a sign-off certificate will not be issued. Let us say, hypothetically, that a company has operated the storage for 40 years—CO_2 had been sequestered for 40 years—and it wants a closure certificate, so we give it a closure certificate. But if we detect a leak in 15 years, it still owns it and we will not give it final closure. If there is an issue, it will still own it; we will not take on liability if there is a problem. That is how it is meant to operate, but one hopes we never get to that because the geological studies around releasing the formation as a potential greenhouse gas storage site will be rigorous so that the permeability around the formation will be such that the risk of leakage is extremely low.

Mr M.J. COWPER: Notwithstanding the fantastic and competent engineering work that will be done around a potential site—for argument's sake, let us say an escape happened—what contingencies will be in place to deal with a leak?

Mr W.R. MARMION: The monitoring will be set up in such a way that any detection of a possible leak will be found early and a long way from the actual surface. One of the first things that would happen would be the cessation of its usage. If the monitoring showed a leak, unless that issue could be addressed, it could no longer be used. That will be in place. It may be very tricky to fix a leak, and if that is the case, that is it. But it might be possible to do something in the future because we are talking some years out and all sorts of advances can be made. At this stage, if there is a risk, it will be taken into account. The detection will be early, such that I would imagine that there would be no chance of it then going all the way up to three kilometres to the surface; it would not happen.

Mr M.J. COWPER: Lesueur aquifer is about 3 000 metres below the surface, and it is a saline aquifer that sits below the Myalla aquifer, which is where the water is drawn from for the market gardens along that Myalup strip. There is also a thing called a superficial aquifer, which is generally what is tapped into. Given that the minister was formerly a water minister, he would be very familiar with how those licences are applied. For argument's sake, let us say that one of the market gardeners along the strip—say Mr Battani or someone—applies for and is granted a licence to put a bore in to secure some water for his farm under licence, as is required, and all of a sudden CO_2 starts being emitted from his water bore. Whose responsibility is it from there?

Mr W.R. MARMION: The aquifer is going to be, as the member said, three kilometres below. How many farmers put water bores down three kilometres in the member's electorate?

Mr M.J. COWPER: None, because clearly salt water does not grow vegetables, but certainly fresh water from the Myalla aquifer does. But let us say that there was an escape from that reservoir and it got into the Myalla and the Myalla started going salty, so they whacked down another bore, hoping to find some fresh water, and CO_2 was being emitted. Who would be responsible for the clean-up?

Mr W.R. MARMION: There is whole lot of formation to get to three kilometres—shale, impermeable—and any monitoring will be down near the three-kilometre mark. The prospects of what the member is saying happening are very minimal, because a leak should have been picked up before then by the detection. The hypothetical situation of someone putting a water bore down a couple of hundred metres, or even less, would be quite remote. Nevertheless, if it did happen, and it could be proved that it was actually CO_2, if the owner was saying it was CO_2 from geosequestration, the company would be liable.

Mr M.J. COWPER: I will set that aside now; I have tried to tease it out the best I possibly can.

I note that this clause states that injection sites and areas around them become the property of the Crown. How will the management of these injection sites be conducted? If Mr Brown's dairy farm was assessed as being suitable and an injection site was plonked on it after approval by the minister—I understand that these pump sites are not terribly big; they might be six metres or seven metres square or in diameter—who will own that land? Is it still the landowner or does it then become the property of the Crown?

Mr W.R. MARMION: Again, it is down the track, but one would assume that a prudent operator would move to acquire the land if it was private land or it might use crown land or land that was not private. One would assume that an operator would acquire the land. If the developer did not want to sell the land, the operator would probably be smart to inject somewhere else.

Mr M.J. COWPER: Earlier the minister mentioned monitoring bores. Do the same rules that apply to the injection site apply to monitoring bores? For instance, if there is an injection site and monitoring bores have been established on the periphery on the private land of a dairy farmer or a market gardener, or in someone's backyard in Harvey, to make sure that this stuff does not escape, who owns the 20 square metres of land?

Mr W.R. MARMION: The same arrangement that applies to an injection site will apply to any monitoring bore that might be put down. An arrangement would have to be negotiated with the private landholder if the bore were to be put on private land. There would need to be negotiation to purchase the land or to enter into a leasing arrangement or something that everyone was happy with. The owner of the land would be in a position to negotiate a commercial settlement.

Mr M.J. COWPER: That being the case, minister, could that land be forcibly acquired by the state under the provisions of this legislation or any other legislation?

Mr W.R. MARMION: Everything should be done under a commercial arrangement, but I can envisage a situation in which a pipeline is needed from a CO_2 source to an injection area. Obviously, the state would try to use crown land or private land that the owners were happy to negotiate the sale or lease of under commercial arrangements. There might be a remote possibility of a whole lot of farmers or private landowners blocking the

access from A to B, although it is hard to envisage that there would not be a road reserve. We could get around this. This would probably happen only with a pipeline situation, because in a well situation, the injection well would be moved somewhere else. But, yes, hypothetically, the state government could step in and use its powers to acquire the land for, say, a pipeline if the land for the route from A to B was owned by a private landowner, although I am sure that the pipeline operator could find a route around it.

Mr M.J. COWPER: I was not going to go into the pipeline aspect of it; I was trying to focus on the primary injection points and the monitoring bores. The minister is saying that there are mechanisms in place under which land could be taken from landowners. Would that be under this legislation or under separate legislation?

Mr W.R. MARMION: This bill amends the Petroleum Pipelines Act, so this bill gives the power. It is not a power under the Public Works Act or any other power. The power will rest under this petroleum and geothermal legislation.

Debate adjourned until a later stage of the sitting, on motion by **Mr J.H.D. Day (Leader of the House)**.

[Continued on page 2450.]