PETROLEUM AND GEOTHERMAL ENERGY LEGISLATION AMENDMENT BILL 2013

Third Reading

Resumed from 7 August.

MR M.J. COWPER (Murray–Wellington) [10.01 am]: Prior to adjournment of the debate yesterday, I was making my contribution to the third reading of the Petroleum and Geothermal Energy Legislation Amendment Bill 2013. I was talking about the difficulty I was having in obtaining information on the proposed South West CO_2 Geosequestration Hub, formerly known as the Collie–South West Hub project, in the Murray–Wellington electorate. Having gained some information, I proceeded to inform my constituents who own land in that area I mentioned before bounded by Forestry Road, Old Coast Road, Riverdale Road and Government Road. Government Road is also known as Eckersley Road. I met with a bunch of people about what I knew of the proposed geosequestration project. We held the view that this was probably worth looking at and worth giving a fair go to see whether it could benefit the community. It was about then that it changed its name from the Collie Hub to the South West Hub, and we were advised that the Lesueur aquifer was being explored. The Lesueur aquifer is a saline body that sits about 3 000 metres below the surface in that location. Subsequent drilling and testing has shown that the Lesueur aquifer is actually bigger than was first thought, and in fact goes virtually to the Darling scarp as far as the ocean and north and south of Coronation Road and Myalup drain. The initial area has therefore been expanded significantly and has probably quadrupled in size as far as the saline aquifer is concerned. We saw in our community trucks going along the main roads, with drivers wearing seismic earphones, running out and conducting certain tests. It was about this time when I was going about the place talking to locals who were of the view that the trucks were looking for water or petroleum. Most people were unaware of why these contractors were around the place until I was able to inform them. That went without too many problems. There was an announcement that a test drill site would be located on a parcel of land on Riverdale Road owned by Alcoa for the purposes of conducting a test drill.

These test drills are conducted by drilling rigs that are used in the oil and petroleum fields. A number of them are in Australia and they are mostly American-owned and operated. We now have some Australian-owned companies. A drilling rig has just been put together and is operating out of my electorate in Nambeelup. I have had an opportunity to look at them firsthand and they are very impressive and technical pieces of equipment. They are very interesting from a geological, engineering and scientific perspective. The contractors set up the drilling rig, drilled down some 3 000 metres and along the way did some testing of the various layers that exist through there. At the same time, a Lesueur consultative committee was put together and I was very fortunate to be a member on that committee along with Nola Marino, the federal member, representatives from the Shires of Harvey and Waroona and a number of others. The committee gave us an opportunity to ask a bunch of questions about how this project would work. Of course, I would like to thank Mike Whitehead as my representative on that committee. He asked questions in his capacity as a local environmental scientist who has significant knowledge of the hydrology of that area. I believe that he was very helpful to me personally because he asked the pertinent questions about how this would work. Rather than going into detail on all the questions that were asked, I will summarise by saying that the answers pretty much came back that the contractors had a rough idea of how they would go about this project, but many questions that were asked were unable to be answered until they had completed further testing.

One of the pertinent questions, I believe, was about the potential cost of injecting one tonne of carbon into the Lesueur aquifer and how much carbon would be required to do so. At this time the answer on the ratio varies from between three to one and one to one. It almost brings into question whether capturing CO_2 in the ground is unprofitable, particularly when it has to be piped over vast distances. Where this occurs in other parts of the world, it is captured at its point of injection. In the North Sea and the north west of the United States, the carbon is captured from the processing of petroleum industries and injected back in. It is a similar process to that which will happen at Barrow Island. I therefore share the member for Cannington's view about the South West Hub. I doubt very much whether this Lesueur aquifer project, even if it is suitable for an injection point, will go ahead simply from the financial perspective.

From a taxpayers' perspective, I have some difficulty understanding why this South West Hub project is continuing. The federal government stumped up $52 million of the Gillard government's carbon tax money and, surprisingly, the Western Australian Department of Mines and Petroleum jumped on board, ran with it and is spending the federal government's money. I can understand that when someone comes along with $52 million for a project, a lot of scientists and academics, who from time to time are starved of plying their trade, start to salivate and get very excited about the prospects of doing some scientific research. Already about half of the $52 million has been expended on the injection and the drilling that was conducted and other works that have been done. It has already become clear to people on the consultative committee that the prospects of the South West Hub being a viable option is lost. On that basis, I have some difficulty in allowing another $20 million-odd

of taxpayers' money to be wasted in that fashion just so that scientists can say yes or no to whether it is scientifically possible to do this. I am sure it is scientifically possible to do it, but whether it is scientifically possible and viable and morally acceptable is a whole different question. Although I am confident that this project will not go ahead, it does concern me that some $20 million-odd has been wasted on it. In the meantime, keeping the locals up to date with this information was going along quite nicely. There was not too much pushback from the community about it until about six weeks before the state election when the department made a decision. Usually the only way we find out about these decisions is when we read about them in the press or watch the Channel Seven news and see ministers on the television make some sort of announcement. Again, as a local member I find it very disconcerting when we find out things from the press that will be occurring in our electorates from the press. That is what occurred in this instance. Six weeks out from the state election a notice went out to a bunch of landowners in my electorate saying, "We wish to come upon your land and start doing seismic work." That includes cutting fences. The farmers would be disrupted in their operations. As members can appreciate, many of these properties that we are talking about are irrigated farmland properties that are sodden and obviously valuable for pasture and the like. If we interfere with the pasture growth, we have a problem supplying food, which is a cost to farmers. Many farmers were not very comfortable about receiving that notice and declined the offer to allow people to come onto their property.

A company called GHD was engaged by the department to talk to the farmers about allowing access to various properties. Although I was not present during any of those discussions, it was relayed to me on more than three occasions by farmers or landowners that the tactics of these particular individuals were less than agreeable; in fact bullyboy tactics. In one case I was told that if a farmer failed to allow access to his property, an application to the court would be made and GHD would gain access to the property whether or not the farmer liked it. Reluctantly, one of these farmers signed a piece of paper on the false pretence that this would occur. GHD was applying the provisions of the petroleum and geothermal bill prior to it having been passed in Parliament; therefore, it was operating outside the provisions of the protection afforded by such legislation that we are dealing with today. When we debated clauses 11, 14, 18 and so on in this house—the clauses that relate to access to properties—I had grave doubts that there would be any veto right by a landowner. We heard the minister say that there has to be some sort of consultation. That is provided for in this bill. If agreement cannot be sought, the minister can apply to the court to have a declaration made so that people can access properties. There is no mention of fair compensation in this legislation or something that would be in the interest of the landowners when their operations are disrupted. I hope that will be addressed when we deal with some legislation in this place on the rights of property owners; that is, the taking of land under a fair and just compensation regime. I look forward to that.

In the meantime, the notice that was put out just prior to the election earlier this year caused a lot of disharmony amongst landowners. They contacted my office and asked a range of questions. In particular, they asked whether people could come onto their land without their say so. I informed them that if these people were to present, the landowners should let me know and I would contact Harvey police and ask Sergeant Morley to go around and escort these people off their property. This situation, without the protection of some legislation, has resulted in the erosion of farmers' rights in Western Australia. A 2005 report was tabled by Hon Barry House in the Legislative Council that detailed the issue of the rights of property owners. In excess of 100, approaching 200, pieces of legislation in Western Australia either indirectly or directly affects the rights of landowners. During the grievance debate earlier today we heard about the issues relating to the Conservation and Land Management Act. That is one of many acts that impact upon the freehold rights of property owners.

A number of meetings have been held to try to engage the community. I think the whole process was flawed in many respects because the community was never informed from day one. Much of the information that it received in the initial stages was provided by me. I had to run around and try to access as much information as possible to keep it informed. A number of forums have been held since then. I attended one in particular at the Harvey Recreation and Cultural Centre. Officers from the Department of Mines and Petroleum did a fantastic job explaining what they proposed to do. It was attended by a number of local farmers. That is the sort of engagement that should have occurred in the first instance prior to going down this path. This legislation is putting the cart before the horse. The government has gone into the South West Hub project without any real authority other than what we heard from the minister about the provisions of the Mining Act. I did not want to tease out what that may or may not mean. I do not know that we are mining anything. Exploration of the Lesueur aquifer is being conducted. I am not sure whether there is a deposit of anything with minerals in it, other than salt perhaps. As we know, the Lesueur aquifer is a hypersaline water body that sits below the Leederville aquifer. It is of major concern to our local farmers. When we pressurise the Lesueur aquifer, there is concern in the community that the saline water could potentially be forced into the fresh water of the Leederville aquifer that sits above it. After a test drill, we were able to glean that the Leederville aquifer is 350 parts per million. I am not sure whether the Minister for Water is aware that a body of very good water is available; 350 parts per million is a very good source of water. Anything south of 1 000 parts per million is regarded as potable. The member for

Collie–Preston may be able to help me out here. I think Wellington Dam is sitting at about 915 parts per million these days, having been a bit higher than that.

Mr W.R. Marmion: It fluctuates between 1 100 and 1 900.

Mr M.J. COWPER: That is in the range. We have an aquifer that is 350 parts per million, which is almost better than rainwater. That is the water that the farmers use for growing vegetables. I have been down that strip recently talking to Michael and David Patane, Sonia and Joe Castro, Larry and Jamie Maiolo and the Galati boys—the Spudshed boys—who have vast tracts of land on Finn Road and Forestry Road in Myalup. They pump water from that very same aquifer for their vegetable gardens that supply us with food. Myalup pines run through the middle of this. The former Minister for Water was subject to a grievance from me about the dumping of waste material in the pines. The night soil was taken from the Binningup and Waterman recycling plant to the forest and thrown around the place in order to fertilise the pines. There seems to be duplicity here; that is, they go crook about farmers injecting nitrogen on farmland and the use of fertilisers on vegetable patches but they seem to be able to throw the night soil around the forest with gay abandon. I find that interesting when the various authorities are keeping a very close eye on various growers in that area.

In the meantime, as I mentioned before, in the scheme of things, the prospect of geosequestration is new technology. It is a technology borne out of the petroleum industry. The notion of pumping materials underground came about with Halliburton in the United States about 1950 when it was pumping materials into the ground. It realised that once it did that, it could cause some splintering of the subsurface that causes the gas to escape. We now know this is a way of harvesting natural gas from the ground, called fracking, which in itself is somewhat controversial on the east coast and elsewhere in certain parts of the world. Geosequestration is not fracking, but it belongs to the same family of technology whereby a liquid material is pumped into the ground. With this method, when CO_2 is compressed, it goes into the ground. We understand that in Warrnambool, Victoria, CO_2 is being pumped into the ground as a liquid, not as a gas; it is called super critical. Other members in this house might have better knowledge than I have about what super critical means. It is neither a gas nor a liquid; it is somewhere in between. In Warrnambool, it is pumped into two wells, one of 200 metres and the other of about 1 500 metres, nowhere near the depth this state potentially will be looking to pump in Harvey. In Victoria, it is not being pumped into a saline aquifer; it is being pumped into a freshwater body. The potential for contamination from salt water there is not the same as what could happen here. I suppose that is the crux of my constituents' concerns. Should there be pressure in the hypersaline aquifer, it could easily push through a fissure, a hole or a breach into the fresh water and contaminate it. What chance will farmers down there trying to go about their business have of proving that the CO_2 being injected into their land is caused by this project? Unless they have significant resources available to them that could potentially prove this case, I do not think they would have a legal leg to stand on. They would certainly need significant resources to enable them to prove that in a prolonged court case, and that could virtually cause the ruination of many good farmers in that part of the world.

I will be watching the development of this. I am still gobsmacked at the manner in which the state has jumped into bed, if we like, with the federal government on this issue. Whilst I acknowledge that geosequestration may have a place and potentially could assist us with reducing greenhouse gas emissions, I am not sure that it will be very well received if it is ever attempted in my part of the world—and not because we are suffering from a nimby crisis. There is too much potential for damage to be done to an iconic industry in that part of the world. Harvey Fresh and Harvey Beef Western Australia and all our market gardeners thrive on providing a brand of fresh and quality food to the people of Western Australia.

I am of the view that this Petroleum and Geothermal Energy Legislation Amendment Bill 2013 has been drafted very sloppily, if that is a word. I do not believe that it has been handled particularly well. In retrospect, I believe this should have been a stand-alone bill. It should have come to this place unencumbered and not be providing the same assistance that was provided to the Petroleum and Geothermal Energy Resources Act 1967. I think it should have stood alone and been subject to discussion based on its own merits. I was unable to persuade the minister to change a couple of clauses that I found offensive. I will not support this legislation if it comes to a vote. I will stand on the side benches because I cannot and I will not support any legislation that will impact on the rights of my landowners.

I could say much more on this bill, but I do not think there is any particular point in flogging a dead horse, because, obviously, there is a certain belligerence attached to wanting to pass this bill, and it is supported by the other side. I am unable to direct some reasonable outcome on this. I want to thank the people who contacted my office and have supported me on this. I will continue to fight on behalf of the constituents of Murray–Wellington.

MR M.P. MURRAY (Collie–Preston) [10.26 am]: I rise to strongly support the bill, having been involved with the South West Hub procedure since the beginning. In fact, I chaired a committee that started the process of geosequestration trials in the south west. As has been mentioned, the idea of geosequestration has been around

for many years, and this bill covers both the oil industry and the geothermal model. My particular interest has certainly been in the South West Hub and in trying to help the coal industry into the future. In doing that, when the coal futures committee first heard about geosequestration, we started to make some inquiries, which led us to discover that some people elsewhere in Australia and the rest of the world were much further forward than we were even thinking of. Following that, we went to a couple of meetings on the east coast. The Queenslanders were very keen and very bullish about what they were going to do. Then we found out that some bore holes had been drilled in the south west of Western Australia that had identified an anomaly in the earth's surface—something similar to a bubble—that could be quite possibly used by industry in the south west for geosequestration.

With that in mind, with our federal colleagues, I started to work quite a lot harder. Then I took a delegation to Otway, which is just outside Warrnambool and was mentioned in the member for Murray–Wellington's speech. The people there had been working on how to put CO_2 back into the strata, but, as the member for Murray–Wellington said, to nowhere near the depth we were considering drilling in the south west. After we came back to WA, I was amazed at the change of views of people who had come with me, who, in the main, had been anti this idea. When we were in the bus looking for the site, we expected to see a huge facility, but there was a small compressor, a donga and a few pipes, and many miles of cabling, which were being used to analyse what was happening under the earth's surface. Where did the CO_2 come from? It was naturally occurring on one side of the fault in the earth's surface. It was collected on one side, compressed and driven down the other. All these stainless steel cables were monitoring what was happening underneath. Everything was working to the computer modelling, which surprised some people to a degree because they thought there would be some difference between the computer modelling and reality. But that was not the case; it was working exactly as expected.

What is not understood, I think, by many, is that once the CO_2 is injected into the ground and interacts with salt water, over time it migrates. That is very similar to bubbles in water or different levels of salt water within a freshwater body in that it stays together and moves across. In this interaction, the CO_2 becomes heavier and starts to drop and turns to carbon calcinate. Carbon calcinate being a very close relative of limestone, the CO_2 becomes a solid. So the view that an earthquake will let all the CO_2 out again and therefore geosequestration is a waste of time is certainly wrong. I do not think we have to worry about the idea of an earthquake cracking the earth's surface four kilometres down; we would be vaporised so we would not have to worry about that!

Certainly, we need legislation to make sure that we do not have the issues of the past when people took shortcuts and took it on themselves to proceed without knowing the exact science of what they were doing, so we then had problems in the future. That is why this legislation is very important for not only the South West Hub that I am talking about, but also the gas and oil industries and others. Industry itself welcomes this legislation.

But another point is missed: if we are able to prove the science and capture the CO_2, what a great Western Australia we could have in that we would not be contributing to the release of CO_2 into the earth's atmosphere. In real terms, in the figures and the facts, not a great deal would change around the world, but we would be one of the clean, green areas of the world, which would attract investment into all sorts of jobs. The member for Murray–Wellington has now left the chamber, but one of the big issues in his region is the emissions from Alcoa. If we were able to harness the CO_2 part of those emissions and store it, it would be a great move forward for that region. That is just Alcoa alone, which is one of the member for Murray–Wellington's sorest points. Having been a member for that area previously, I know exactly what the member for Murray–Wellington puts up with in that area. Further, look at the coal industry, which has a very dark name about emissions. If we were able to trap that CO_2 and use it, coal, of which the world has ample, would probably have another 500 years of supplying energy to the world. I think it would be very, very good for Western Australia and Australia generally to be on the front foot and be a leader in the use of this technology.

Some concerns I have heard expressed in this chamber about the process certainly have not been about the process itself. Some farmers from the Harvey area rang me with complaints, but their complaints are far removed from geosequestration; their complaints are about access to their properties more than anything, and I can understand that. But when we look at it, we see that Western Power contractors who look after the lines have rights to go through farmers' properties. It may be another area, but farmers' rights about who comes on their property, and when and how they do it, should be looked at a bit more closely. However, that is certainly not to be mixed up with the Petroleum and Geothermal Energy Legislation Amendment Bill 2013; it is an entirely different issue. It has been an ongoing source of contention probably since the 1800s, especially given some of the early title rights. People did not like prospectors coming through their land, even with a pick and shovel. There was the old adage that we had one chain either side of a river so that people could travel through farms with the right to camp on those riverbanks because they had rights to access the water. Those sorts of things are still there, but it does not help these farmers if they get up one morning and see a truck going across the middle of their paddock that they have just laser levelled to put in a crop, but the people driving the truck were ignorant

of that fact. I hope that does not happen. Farmers are concerned about their rights in that regard. However, when I explained to them the process of geosequestration, they started to change their view.

We need to look at what CO_2 is in our daily lives. It is a major part of the make-up of our atmosphere and a major part of our diet. When they open a can of Coke, many people in this place would wonder where the fizz comes from. CO_2 is used for that. I think in WA it is taken out at Kwinana. Coke buy it from there and puts it through its factory. I think it is at the Wesfarmers processing gas plant, so Coke picks it up from there and uses it. However, CO_2 can be stored—and stored in different ways. This is just another way of storing it away from the earth's atmosphere, and in real terms it puts it back where it once came from. CO_2 comes from coal and volcanoes, and that is where it will be put back. Therefore, I do not see the problems with the process that some other people see. Leakage between aquifers is one concern. There is a huge amount of strata of varying sorts in the four-kilometre depth of those aquifers. Just off the top of my head—I could be not far out—I think there are four seams of coal where the aquifer has been drilled at Harvey. When CO_2 hits coal, it swells up so it is not able to go through the coal bands, let alone the stone bands that block it and are unable to absorb CO_2, such as the sandstone where the CO_2 will be pumped. A lot of furphies have been put out, I believe, in this place. I did not hear any grizzles about water bores that go into aquifers, such as the test bores that were not lined at the time and go between many aquifers. I think one of the bores at Harvey is about 1 500 metres and goes through quite a few levels, including the Leederville aquifer. I think that borehole goes through three aquifers. But I do not hear farmers grizzle about that because they are the end users. They cannot have it both ways; they must think about it in the long term. One lady, a property owner in the Yarloop area, rang me and she was very irate, to say the least. I was holding the phone at quite some distance while she gave me a fair earhole bake! I said, "Okay; as you're concerned about the environment that you're in, so am I. What about the methane that comes from cows?" The conversation did not go any further other than she slammed down the phone.

We need to deal with issues from both sides and to look at them in a global sense, not just the one part that affects us because it is directly there. Think about the south west as it is at the moment and its future. There are not many jobs there at this time and no major projects are on the way. But if we were to have carbon capture and storage, I am sure that that would change. It would give people much-needed jobs and provide security to areas such as the Alcoa operation and the coal industry. Most people know my background in the coal industry. The coal industry has taken a fair whacking about its contribution to climate change. Some people believe that it is a very dirty industry, but it has cleaned its act up over time. If the coal industry were able to have a level playing field with all other industries, the growth that could come from that would be tremendous. It would be great to see some of that growth in mining, manufacturing or processing—in any of those things that we desperately need in the south west. I do not know all the facts and figures about fly in, fly out, but I do know that many people from Collie, Busselton, Bunbury, Dalyellup and Eaton are on fly in, fly out. If we do not find some industry for them when those contracts finish, we will have a big problem in the south west. I believe this legislation will encourage the companies to get on board and provide some funding; this would go with federal government funding, which I believe at this stage is at the $55 million mark. I am very hopeful that if a Labor government is elected at the federal election, further funding will be made available. Working towards that, we need this legislation. We talk about the funding side of it, but there is a very, very large cost involved in putting a well down nearly four kilometres. This is not going to be a matter of just putting in another well; an analysis will be done of whether there is a future there and whether we can keep moving forward. All that is being done. All we need in the future is to say yes; then we need some funding.

We need to support this legislation. I understand the farmers' fears about an invasion of their property rights. One of the big dairy owners down there said that he cannot just drive onto somebody else's property. After we spoke for a while, I asked him what was really the problem, and it was about property rights on the surface. The other side of it is that if gold or diamonds had been found there, would they be grizzling about that if they were getting a sling off the back of the gold or diamonds and were able to work through the property rights issues and get an income from that, which I would not blame them for? That is the difference that I see. Again, this is a very important step forward in carbon stripping, capture and storage, and I strongly support this bill.

MR W.R. MARMION (Nedlands — Minister for Mines and Petroleum) [10.41 am] — in reply: I know that members are rushing in to get onto the next bill, so I will not be too long. I thank all members for their contributions to this debate, the majority of which were in support of the Petroleum and Geothermal Energy Legislation Amendment Bill. I particularly thank the member for Collie–Preston, who made an excellent contribution to the third reading that pretty well summed up why the bill is important. If people are reading the *Hansard* in the future, I might just refer them to the member for Collie–Preston's contribution to the third reading debate, because I do not think I could deliver it better myself. I acknowledge all those who spoke on the bill. I thank my ministerial staff who have been involved with the bill and the staff from the Department of Mines and Petroleum who have been working on this legislation for some years.

I think the methodology of using the Petroleum and Geothermal Energy Resources Act to cover the area of geosequestration of greenhouse gases was an elegant solution. Most of the activities and processes involved in geosequestration are almost identical to those for petroleum and geothermal energy, so it is an elegant solution. I think it was better to do that than to bring in a separate bill, because it would have been quite complicated to go through and explain the processes of geosequestration in new legislation; I think we would have been here for many weeks. The current process, which, indeed, was adopted by the commonwealth, was a good way to go.

I was not going to speak much longer, but I must acknowledge some of the very good points made by the member for Collie–Preston in the third reading that were not raised during the rest of the debate on the bill. He made a very good point about drilling aquifers with less casing and security around the lining of the casing right through the aquifers. Any petroleum, geothermal or, indeed, geosequestration drilling will have very high-tech and very safe and secure casings—the member for Collie–Preston has probably seen the casings that are used. That was a very good point. Another good point was raised in the third reading debate by the member for Cannington. He talked about liability, which has been a particularly interesting aspect of the bill. How do we cover liability for something that could occur 70 or 100 years in the future? The point raised by the member for Cannington, which was a new point, was the possibility of having a future-type fund that the geosequestration operators would pay into. With a future fund, not too much needs to be put in for it to be worth many billions of dollars over a period of 70 or 80 years. Under the mining rehabilitation fund that we have just brought in, people can relinquish bonds for mining. That is a similar sort of process. We are looking at the possibility of having a similar sort of fund for the petroleum and geothermal industry, which would also roll in with geosequestration. The point made by the member for Cannington is something that we are looking at anyway. I commend the bill to the house and thank all members for their contributions.

Question put and passed.

Bill read a third time and transmitted to the Council.