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Mr Bill Johnston; Mr Fran Logan; Mr Mick Murray; Mr Brendon Grylls; Mr Chris Tallentire; Deputy Speaker; Mr Murray Cowper

BARROW ISLAND AMENDMENT BILL 2015

Second Reading

Resumed from an earlier stage of the sitting.

MR W.J. JOHNSTON (Cannington) [2.39 pm]: It is always nice to address a large audience. I am always looking forward to it.

Before question time, I was just getting to the point about the fact that the south west of Western Australia is one of the places most severely impacted by climate change caused by carbon pollution. The reason the Chevron joint venture is geosequestering the CO₂ from the Gorgon project is to ameliorate that climate change issue. It needs to be completely understood that if we do not accept the science on climate change and carbon pollution, we do not support geosequestration; we would simply support venting carbon into the atmosphere. It is good that for the second time in this current term of Parliament, this Parliament is taking action based upon our belief and understanding that climate change is an important issue caused by carbon pollution. As I said, if there was no link between carbon pollution and climate change, we would not be going to the expense and effort of geosequestration; we would simply continue to vent the gas into the atmosphere. I am pleased that the Liberal-National government in Western Australia, like the Labor opposition, supports the science on climate change and that it is not an issue for debate. That is now a bipartisan closed issue—members on both sides of the chamber support action on climate change. That is why the government has entered into this agreement with the commonwealth to support Chevron's actions in fighting climate change. I urge members to go to Chevron's website and look at the various tools discussing climate change. It has a wonderful little device on its website that represents certain cities. It has various inputs from different sources of energy and shows the effect of carbon pollution on that city. It allows people to make different choices and then see how CO2 pollution contributes to climate change.

Mr V.A. Catania: Just on Chevron and what happened at Wheatstone in terms of their village going to the actual site, what are your thoughts on that?

Mr W.J. JOHNSTON: As the member knows, one of the criticisms of the current government regarding Wheatstone is that the government in which he is a parliamentary secretary approved Chevron keeping the permanent workers' camp at the industrial site instead of —

Mr V.A. Catania: Do you support that?

Mr W.J. JOHNSTON: Obviously not. That is why we opposed it. The member is a formal part of the government. He is a parliamentary secretary, not a backbencher. The member sitting next to him is only a backbencher.

Mr V.A. Catania: That is the first time I've heard you say that you're opposed to it.

Mr W.J. JOHNSTON: We opposed it at the time. We said that it was not a good idea. We asked questions, if the member remembers. The Leader of the Opposition, the most senior person on our side of the chamber, asked several questions, as I did. I asked a question of the Minister for Mines and Petroleum. I asked why people driving to the Chevron project could not travel that distance but people travelling to the North West Shelf joint venture could travel. I am very thankful to the parliamentary secretary, who is a member of the government that allowed this decision to be made. It is also interesting that another decision of the government—I know the member for Gosnells will talk about this—gave conditional approval for the Wheatstone project on the basis that there was a commonwealth carbon scheme. That was written into the approval—that it did not need to deal with the question of CO₂ emissions from Wheatstone because the commonwealth government had already acted in that area. The member might make some observations about the fact that the commonwealth government has repealed the carbon action plan, yet we are not aware of any changes to those conditions that were issued on the basis of a national carbon scheme.

I thank the parliamentary secretary for his interjection. It is unusual for the member to make a contribution in the chamber but we do enjoy them when he makes them. We look forward to the next one. The next time he gets up and speaks in the chamber, we will all look forward to that because I am sure his next contribution will be better than his last one. I would very much expect that because it would not be difficult for it to be as good as the last one.

Moving on —

Mr V.A. Catania: I think you should sit down now.

Mr W.J. JOHNSTON: As I said, I look forward to the parliamentary secretary's contribution to this debate. We are endorsing action to prevent climate change. That is exactly what we are doing here.

Mr M.J. Cowper interjected.

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Mr W.J. JOHNSTON: I look forward to the member for Murray–Wellington making the same contribution, explaining where he stands on the question of action on carbon pollution. The only reason anyone in this chamber supports the Barrow Island Amendment Bill 2015 is because we have a deep-seated concern about climate change caused by carbon pollution. There is no other reason for supporting it.

I was making the observation when I was interrupted by the interjections from the parliamentary secretary that Chevron's website has a very good tool with which people can experiment with the impact of various technologies on carbon pollution. I compliment Chevron on its website. It is a clear demonstration of the fact that it understands that action needs to be taken. Indeed, the websites of most of the large oil and gas companies contain good detail about their views on carbon reduction and climate change.

Recently we saw a category 5 storm in Vanuatu effectively destroy all the infrastructure in that country. It is obviously a developing country—a country that does not have the same style of economic activity that we have. It has been so badly impacted by storms. One of the issues that is raised by climate science is that there may well be more and larger storms. We recently saw the storms off our coast that impacted Barrow Island that I discussed before. If humanity across the world does not take action on climate change, these things may happen. Indeed, the Premier has often said that one of the ways to take action on climate change is to use clean burning gas rather than more highly polluting sources of energy. That has been a regular comment from the Premier over many years. I properly acknowledge his position on that. We are very happy.

Again, if we go back to 2003, why was action on carbon dioxide contemplated for the Gorgon project? Even back then, we had a clear understanding of the impacts on the south west of Western Australia—one part of the entire world that is most severely impacted by climate change. The Water Corporation's advertisements on TV specifically refer to those issues. They refer to what happens as our climate changes and the actions we need to take. That is why carbon sequestration was high on the agenda on the Barrow Island project. It was a very important issue for the Labor Party. It was one of our key topics of conversation in the 2005 election campaign when the member for North West ran as a Labor candidate. It was one of the important issues we were campaigning on at that time. The Labor Party used the 2003 state agreement with the Chevron Gorgon joint venture as an example of its commitment to its action on climate change. I am sure that was one of the reasons the member for North West Central was so attracted to run for the Labor Party in the 2005 and, indeed, the 2008 election campaigns when these things were very important to the Labor Party and the member was an endorsed candidate, and before he ratted on the Labor Party and his supporters.

The Labor Party is happy to support this bill. As I have outlined, there is an alternative process. We are not in government; we have not negotiated and we are not criticising it, as we did with the amendments to the Petroleum and Geothermal Energy Legislation Amendment Bill 2013. There is nothing improper about this structure. It is probably not the best way to do it, but there is nothing wrong with it. This is a state agreement, and on that basis, if we were to come to government, we would not change it, because state agreements cannot be changed unilaterally, so Chevron and its joint venture partner should be confident that any future Labor government would continue to support the arrangements contained in this bill. As I say, there is nothing improper about transferring the liability to the Crown because of the issues that I raised about how long companies last and how long the liabilities are for. The Labor Party is pleased that the commonwealth recognises that it is getting most of the benefits from the Gorgon project, and it is holding the highest amount of the liability. However, in the same way as we did on the passage through this chamber of the Petroleum and Geothermal Energy Legislation Amendment Bill 2013, we note that there could be another conversation with companies covered by those arrangements about how we provide for future liabilities in the geosequestration of CO₂.

I thank you, Mr Acting Speaker, and I commend the bill.

MR F.M. LOGAN (Cockburn) [2.53 pm]: I rise to say a few words on and indicate the Labor Party's support for the Barrow Island Amendment Bill 2015. There is nothing particularly new or groundbreaking in the whole process of capturing CO₂ and capturing carbon, because it has been chemically known since the early nineteenth century and it has been technically undertaken on a significant scale since the end of the Second World War. Taking CO₂ out of a gas stream is done regularly, and is certainly done regularly by oil companies around the world, and injecting CO₂ into depleted oil reservoirs to pump up the remaining oil in those reservoirs—sometimes mixed with water, and sometimes simply CO₂, including liquid CO₂—is regularly undertaken. In fact, I visited Chevron's Rangely site on the high plateau of Colorado in the United States to look at the program of injecting CO₂ into depleted oilfields. The program in Rangely has been underway for over 40 years, and in fact the CO₂, which is used in the Rangely reservoir enhancement program, is pumped from a power station 500 miles away in another state to the high plains of the mountains and is then used by Chevron for reservoir enhancement. Therefore, the technical concept of using CO₂ in either a gaseous or liquid state for oil well enhancement programs is well understood.

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What is relatively new and is still fairly untested around the globe is the whole process of storing liquefied CO_2 . The actual technical process of stripping CO_2 out of a coal-to-gas process, which had been used before the Second World War and certainly in South Africa where gasification of coal had been regularly undertaken in the 1960s, 1970s and into the 1980s, and the stripping of the CO_2 out of a gas stream is well understood. We know a lot more now than we ever did about the storage of the liquefaction of CO_2 stripped out of gas streams, whether it is natural gas, coal seam methane or coal gas, because of our understanding of geology and of the behaviour of liquid CO_2 injected under pressure into reservoirs. We also understand the behaviour of CO_2 injected into oil well reservoirs, which has been monitored as well.

If we look at the number of locations in which CO_2 injection programs have been undertaken around the world, the very first one was BP's In Salah CO_2 project in Algeria. It was a fairly large CO_2 injection program in which CO_2 was taken from a gas stream in the deserts of Algeria. It was a very technical project and a very challenging project given its location, and certainly the understanding of how to inject liquid CO_2 under pressure for the purposes of it remaining in a reservoir was learnt, I think, in a significant way in the In Salah project in Algeria. BP made that information available in various reports and at talks given at industry forums around the world, including here in Western Australia. So confident was BP at the time about the future of carbon capture and storage—that is, the capture of CO_2 out of a gas or coal stream, liquefaction of that CO_2 and the storage of that liquid CO_2 underground—that it was planning to go ahead with a number of projects around the globe, one of which was going to be in Kwinana.

The first project BP wanted to get underway was a carbon capture and storage program in Scotland from a gasfired power station, using gas from the North Sea that had a high CO₂ content, from which it was going to strip out the CO₂ liquefy it and inject it into a reservoir. The second BP project, which was proposed during Labor's term of government, was the ZeroGen project in Kwinana. I wish it had got underway, because it would have been absolutely remarkable had it succeeded. The project involved building a coal-fired power station in Kwinana using Collie coal and a gasification plant to gasify the coal and stripping plant to strip out the CO₂ from that gasification plant. The liquid CO₂ would then be transported by pipeline to sites located on the scarp south of Harvey where it was to be injected into what were seen to be safe and reliable reservoirs. Had that project initiated by BP and backed by BHP, Rio Tinto and Siemens got underway it would have been the first of its kind in the world. It would have been the first large commercial clean-coal power station that would have put in place infrastructure to contribute to the removal of CO₂ from most of the carbon-releasing industries on the Kwinana strip. It would have put those industries' CO₂ streams through the liquefaction process and transported it to the site south of Harvey for injection. That project would have delivered for Western Australia not only a clean-coal power station, but also the world's first absolutely clean industrial area with no CO₂ emissions. It would have been phenomenal. Unfortunately, that program, along with BP's Scottish program, did not get underway. I think that was mainly because of the cost involved. The program fell away and BP lost a fair amount of interest in geosequestration and it has moved on to other things.

Algeria was the first project to get BP's and the globe's interest. In Norway, the state-owned oil company Statoil has a project underway at Snøhvit in the very north of the country that pumps gas onshore from deep in the Arctic Ocean to a couple of LNG trains. As part of that there is a stripping process to strip CO₂ from that gas stream and an injection program similar to the one proposed for Barrow Island, but not with the same volumes of gas. Statoil also has an injection program on its giant Sleipner platform complex, which is right smack in the middle of the North Sea between the United Kingdom and Norwegian sector. That is a massive distribution hub for many of the North Sea gas pipelines. The enormous offshore hub has a processing plant that uses the CO₂ for injection and reinjection purposes in oil and gas well enhancement.

In Australia, there are a number of smaller projects at Fairview and the Callide Oxyfuel project in Queensland, but they are only demonstration projects. That leaves Barrow Island as one of the remaining CO_2 injection projects in the world and it is certainly the largest of its kind in the world.

Mr M.P. Murray interjected.

Mr F.M. LOGAN: The member for Collie-Preston indicated that there is also a demonstration project in Otway in Victoria as well. The other projects in Australia are small demonstration projects; Barrow Island is the first major commercial CO_2 carbon capture and storage project outside Algeria and Norway. It is certainly larger than both of the other projects that I referred to.

How did the project come about? It came about because under the Labor government from 2001–08, we pushed the issue of greenhouse mitigation very, very strongly. I have looked back at the reports produced at the time, and the "Western Australian Greenhouse Strategy", which I was involved in, is a significant document that was to take Western Australia forward on greenhouse gas mitigation. The Premier may remember the legislation that I brought into the house in 2002–03, including the world's first piece of legislation to allow biosequestration and

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the registration of carbon titles on land and for the fundability of carbon titles so that those titles could be sold. It was a world first. Later, I was a co-author of a large report on geosequestration as part of the greenhouse strategy for Western Australia. That report was taken up by the CO2CRC, which considered it a groundbreaking and innovative report from a state government promoting and encouraging the use of carbon capture and storage as a way to mitigate and reduce our CO_2 footprint. That is the picture I want to paint for the house into which Chevron brought the idea of a carbon capture and storage project for its gas stream that will feed into the Barrow Island complex.

Mr C.J. Barnett: Without wanting to claim any undue credit, as I said to you before, the idea to use Barrow Island was first my suggestion to Gorgon, because they would not have got federal approval. They dismissed it as highly unlikely. I give you due credit, but the idea of reinjecting carbon started to be talked about in the late 1990s. I suggested it, not as a scientist in any sense, and it was only some time later that they came back and said that they were going to look at it, because they would not have got their federal approvals either.

Mr F.M. LOGAN: That is right; but, as I say, we created the environment and encouraged Chevron to do that. The geological work was done during the period we were in government when Chevron understood a great deal more about Dupuy saline reservoir two kilometres below Barrow Island. After doing geological work, Chevron realised that the reservoir was a sound and solid structure that was capable of taking the volumes of liquid CO_2 that it was planning to inject into that reservoir. I am very pleased to still be in the house to see the whole project go ahead and to see, within a very short time, the CO_2 begin the process of being liquefied and injected into the reservoir.

Mr C.J. Barnett: I will ensure you are at the opening.

Mr F.M. LOGAN: Thank you, very much, Premier.

The member for Cannington talked about concerns that have always been expressed, particularly by environmental groups, about the long-term safety of injecting CO_2 into these reservoirs. Remember, there is a geological overlap between this process and fracking. The gas is stored two kilometres down in a reservoir that currently has water in it. If that reservoir were not solid, the water would not be there. It is a solid and non-porous reservoir, otherwise the water would have gone. The reservoir can hold the saline water and therefore will be able to hold the liquid CO_2 .

[Member's time extended.]

Mr F.M. LOGAN: The member for Cannington referred to the modelling that has been undertaken. I accept that the computer modelling for the storage of liquid CO_2 in a reservoir, such as the Dupuy reservoir, can only go up to 1 000 years; nevertheless, there is a gradual dissipation of the liquid from the various points of injection. It then starts to emulsify during that period and goes into a thicker state and the projected modelling, although it cannot be shown on the computer, shows that after time the gluggy-type liquid eventually comes to the roof of the reservoir, sticks to the roof of the reservoir and, ultimately, turns back into the limestone that it originally was

Mr M.P. Murray interjected.

Mr F.M. LOGAN: Yes, it becomes calcium carbonate. It turns back into what it originally was. That is basically how carbon capture and storage works, for as much as we know it works up to at least 1 000 years. In a longer term period of up to 10 000 years, it will basically turn back to its original form.

Mr C.J. Barnett: My advisers have said that there are three layers of basalt currently in place —

Mr F.M. LOGAN: Above Dupuy's CO₂?

Mr C.J. Barnett: Yes, so it is pretty hard to get out.

Mr F.M. LOGAN: Exactly, that is right. As the Premier indicated, there are three layers of basalt rock above this reservoir going right across the whole formation. Therefore, the likelihood of the CO_2 releasing is very small. Members should remember the CO_2 is a liquid. Even if it was to force its way back up under pressure for some geological reason, it would turn into a gas probably 800 metres below the surface and eventually escape. The concept itself is fantastic and I am very pleased that this piece of legislation is helping that concept come to fruition.

There are a couple of issues that I am still not quite sure about, Premier. In the Barrow Island Amendment Bill 2015, 80 per cent of the liability has been accepted should there be an incident with the injection process. This 80 per cent liability has been accepted by the commonwealth through an indemnification process relating to a commonwealth act of Parliament dealing with carbon capture and storage. I would like the Premier to explain this a little further in his response to our comments. It is absolutely appropriate that the commonwealth accepts

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not just indemnity but also liability for this project on the basis that it is the commonwealth's CO_2 . Barrow Island is part of Western Australia but the gas stream comes from commonwealth waters, from which it collects commonwealth royalties and it gives Western Australia the leftovers, which is the CO_2 stream. As I said, this CO_2 is processed, liquefied and injected. The liquid CO_2 that is put into the Dupuy aquifer is commonwealth CO_2 ; therefore, the commonwealth should take responsibility and accept liability should an incident occur with the injection process.

I also raise the issue of the 15-year period after which the commonwealth and the state take responsibility for the carbon capture and storage project. The issue of liability was certainly a significant point of discussion when I was Parliamentary Secretary to the Minister for the Environment and chair of the greenhouse strategy group. Debate was happening all over the world at that time about how a company—even a company the size and the age of Chevron—can accept liability for the disposal of a product that could last as long as 10 000 years, given the fact that there has not been a company in existence for 1 000 years, unless we count the Vatican, which is the only large organisation that I know has been around for a couple of thousand years. No corporation has been around for even 1 000 years. What is a company being asked to do in taking on liability that might stretch out to 10 000 years? It is quite understandable that ultimately that liability has to fall back to the state. The point of the debate around the globe during the 2000s was: at what point does the state take responsibility and liability for a carbon capture and storage reservoir? I note that a 15-year period following the cessation of the CO₂ injection has been put into this legislation. I ask the Premier to explain to the house why the 15-year period was accepted. During the debate from 2001 to 2008, there were proposals that it should be a period of 50 years or 100 years on the basis that some companies have been around for that long and therefore that liability should lie with the company for as long as possible until it ultimately reverts to the state. I do not understand why the 15-year period was adopted. That was another issue.

The final issue is that there is a component that is not mentioned in this legislation that I think should have been highlighted. As proposed by this piece of legislation, the liability will fall back to the state after 15 years following cessation of the injection process and with that liability is a responsibility to continuously evaluate what is happening in the reservoir. What is happening to the CO₂? Is it still safe? Is it starting to dissipate in the way in which we modelled it? Are there any geological problems or fissures associated with that saline reservoir that could cause complex problems in the future? The monitoring of that reservoir is critical because there is a responsibility that goes on for literally thousands of years. There is a cost to that. I do not know whether Chevron, as part of its concluding process of the carbon capture storage project, is obligated by the state to contribute to that monitoring process. If it is not, my view is that it should be. As an organisation, it has done very, very well out of Western Australia. Once this project is finished, it may very well shut up shop, chop up the liquefied natural gas facilities on Barrow Island to go as scrap to wherever is the cheapest place at the time to process scrap and leave one pipe sticking up with a cap on it on a fairly innocuous block in the middle of the island, with hundreds of millions of tonnes of CO₂ two kilometres underneath it, which the state has to ensure is monitored and contained in a safe manner. Chevron should contribute to that. I am not sure whether that has been negotiated as part of the current deal reflected in this legislation. It is certainly not in the legislation and I have asked the Premier to make some comments about this proposal.

Finally, while we are on the issue of Chevron and Barrow Island, I must express significant disappointment with the way in which Chevron handled itself during recent cyclone Olwyn, which resulted in fear and panic for a lot of people working on Barrow Island. The toppling over of a crane resulted in a worker having not only his legs crushed, but also one leg amputated. A significant number of workers were sleeping and living on the floor of both the dining mess area and offices. Remember, at the time the cyclone passed the island it was at only category 2. I heard about a number of people who were told to go back to their dongas to sleep as the dongas were rated to withstand a category 2 cyclone. When those workers pointed out to their supervisors and foremen the possibility that it could increase to category 3 and asked what they should do then, the response was, "Just stay where you are. We'll come and get you if it goes to category 3 or we'll ask you to make your way to a safe area in a category 3 cyclone." That was just ridiculous! If this is a reflection on how Chevron and its building contractors currently do business and manage the passing of a category 2 cyclone, God help us if a category 4 or 5 cyclone passes or even hits that island! It is also a reflection on the way in which things are done on many offshore installations. I certainly hope that Shell takes a close look at what happened on Barrow Island for its FLNG project, *Prelude*.

MR M.P. MURRAY (Collie–Preston) [3.22 pm]: I too would like to make a contribution to the Barrow Island Amendment Bill 2015. I want to refer mainly to some of the history of my electorate to fill in a few gaps that I believe the member for Cockburn did not quite fill in and to show why I support this bill.

To go back in time, after some debate with then Premier Gallop, funding was given to the Collie area to look into the issue of how to expand the coal industry. At the time, issues about climate change and carbon trading were certainly very much on the cards. Out of that, the Collie coal futures fund group was formed and from there we

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took on several projects. Among those projects was the carbon geosequestration project. At that time the group was a bit green about the whole issue of geosequestration, but once we got a handle on what it was all about and where it quite possibly could be done, that group certainly expended some money. Having said that, some luck was on our side in the Pinjarra-cum-Harvey area, where bore holes for water had already been drilled. We were therefore able to use the logs that were already there, which saved a huge amount of money, and since then further drilling has taken place.

I am interested to hear what the member for Murray–Wellington will say on this issue, because he has opposed it the whole way along. I do not know whether his opposition is just his opinion and that of some people in his electorate, or whether it is a sou'-west issue with the attitude that we can have it in the nor'-west but we cannot have it in the sou'-west because we might upset a few people. However, to be quite honest, the process for how it is pressurised and sent down as a fluid itself has been well outlined by the member for Cockburn. Unfortunately, education of people has not been at the forefront for them to understand that it is not a gas and that if we have a bit of an earthquake, it will not all pour out into the atmosphere, which tends to be the view of many people. However, as I have said, if a drill goes down three and a half kilometres and the surface cracks down that far, we would be in a bit of bother anyway and I think that more than just the stored carbon would be up and oozing out into the air.

However, computer modelling has taken place over at Otway. The people there are lucky that there is a fault where CO₂ comes out of the ground naturally on one side, so they capture it there and pump it across the fault and back down the other side. A busload of about 15 people, including Shire of Harvey councillors, coal industry and Worsley Alumina people and others went over to have a look at the—I suppose—carbon factory at Otway. We travelled for quite some time on the bus and looked out of the window thinking we must be getting there soon. We were looking for a great big shed or factory, and it was disappointing, to say the least, to see that it was about the size of a large garden shed containing a couple of reasonable compressors and monitors. The whole area would not have been as big as this chamber.

Mr C.J. Barnett: Where was this?

Mr M.P. MURRAY: It was at Otway in Victoria. I think Warrnambool is the closest town.

We were out in the sticks looking around and there was this garden shed with a mesh fence around it. We were a bit disappointed, to say the least, to see that the whole operation was a couple of dongas and a garden shed run by two people. However, the people in that area did not have the same problem with people's concerns about the impacts and what would happen in the event of an earthquake. All those matters had already been gone through and regurgitated, as they had been in WA. After having gone there, having been educated on the ground and having brought back that information to the Harvey shire, very little resistance was shown once the information was presented by the shire president, who I think at that stage was Peter Monagle. I am not sure who else from the Shire of Harvey went, but that information allayed people's fears.

I was therefore surprised to see the member for Murray–Wellington jump up and down and object to this much-needed project. The federal politician Nola Marino also opposed it. We therefore have this Liberal crew down south who are not quite in sync with the Liberal crew up here in Perth. I hope that they get their act together and support the changes to the Barrow Island agreement, because one of the major problems we had in the past was a lack of legislation for who owned it and who was responsible for it into the future. That was probably the biggest problem of the whole issue of geosequestration. The soundings and tests that have been done in the harbour area show that under the earth's crust is a bubble—similar to that very broad brush. The drill goes down the well through the bubble to the crust and the CO_2 gravitates away from the well; so, there is no problem with pushing down. With pushing all the time, gravitation can happen. From there, CO_2 would be able to be picked up from Kwinana because it is not very far to run a pipe through and pressurise it. Surprisingly, the number and size of pipes needed are very small because they are under high pressure and they are not over-intrusive in being carried through an area.

However, one of the things that I am very proud of out of this process was garnering \$50 million in funding from the federal government over time. It is good to see that in recent times the state government is also contributing a little, although it is jumping on the bandwagon and saying to the current federal government that we need some more money. I hope that keeps going. I hope that in the future we will remember that carbon, as it is taken out as oil or coal or any other fossil fuel, comes from the earth. What we are doing is putting it back to where it has come from—the earth. That is one of the biggest positives that we can see out of this whole project. We are moving on. It is great to see that Chevron is doing this. There have been pump-backs previously, but not in the same category as this. I hope this all goes well, with the support of the federal and state governments.

MR B.J. GRYLLS (Pilbara) [3.31 pm]: I rise to make some comments on the Barrow Island Amendment Bill 2015. Obviously the purpose of this bill is to consolidate in legislation the agreement with Chevron in and

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around the abatement of carbon. Interestingly, time has moved on from when this was a very prominent item of discussion in the wider community. That was at the time when Kevin Rudd was the Prime Minister, and carbon abatement was an important public debate.

Mr C.J. Tallentire: Are you saying that internationally, it is no longer an important public debate?

Mr B.J. GRYLLS: If the member for Gosnells would let me speak, I will talk.

Mr C.J. Tallentire: Are you saying —

Mr B.J. GRYLLS: The member is interjecting on me before I have said one sentence. If the member for Gosnells is happy for me to continue, I will. I said I find it interesting that this negotiation was done at that time. Since that time, there has been much water under the bridge in the debate around carbon abatement, but we are now in the Parliament and putting that deal into legislation.

Mr M.P. Murray: It is very interesting to note, member, that I saw on the telly the other day that your colleague in the background had a Chevron shirt on! I was very interested to see that Chevron shirt!

Mr B.J. GRYLLS: I told him that I would not be talking to him again!

I had some role to play in some of the negotiations with Chevron around its major developments on Barrow Island and onshore around Onslow, and that is very important for the Western Australian economy. The reason I want to contribute to the debate on this bill is my concern about some other parts of the negotiations with Chevron and what the outcome will be in the local Pilbara community. It seems that the government is continuing to play its part in facilitating Chevron to proceed with its project. Chevron wanted to make sure that the ongoing legacy of the geosequestration would not be only its problem; it wanted the federal government and the state government to be involved. The federal government and the state governments agreed to that, and that is what this bill does.

However, another part of that negotiation and agreement with Chevron was around its workforce, and around regional development and community development, and that is what I want to spend a few minutes of my time talking about today. This Parliament is being asked to ratify the arrangements that have been put in place for carbon abatement. However, we need to recognise also that Chevron, post that, requested to be relieved of some of its obligations with regard to regional development. I think that is a very poor outcome for the local community of Onslow. I hope that the Premier in his response to the second reading debate will share with the Parliament some of the reasons behind those decisions, because on face value they do not seem to be delivering the best possible outcome for the community of the Pilbara and for the future development of Onslow to support the oil and gas sector.

During the time I was Minister for Regional Development, we requested of Chevron that its operational workforce in Onslow be housed in a purpose-built, high-spec village in the town centre of Onslow, for want of a better description. We felt that this was very important. Onslow is a very small community—a little hamlet, I suppose we could say. Big projects such as this put enormous pressure on the town. Through the Pilbara Cities project, we wanted to see a long-lasting legacy from major projects such as this. It was, therefore, negotiated with Chevron at the time that it would build an operational village in Onslow. To give members an idea of what I envisaged from this, Rio Tinto has built a village in Wickham called Cajuput Villas. That is a much higher spec village than most of the donga camps that we have seen previously. It is a multistorey, apartment-type complex, with very good built form and architecture, and Onslow could have really done with the renewal that would have come with that project.

However, as time went on, there were discussions around the Chevron project running over budget and over time, and Chevron came back to the government and requested that rather than build the village in Onslow, as it had committed to do, and for which LandCorp had set aside land, it wanted to house its operational workforce in essentially the construction camp for Wheatstone, and that was agreed to by the Premier. I hope that the Premier will explain why that decision was made so that I can explain that to the people of the Pilbara. The argument put by Chevron was around its concern about the safety of its workforce because of the travelling time between the plant and the proposed village in Onslow. The member for North West Central tells me that the distance between the town and the plant is 25 kilometres. Chevron made the argument that it would be an impost on its workers if at the end of their long shift they had to be mobilised into a bus and transported back to the facility at which they would spend their hours while off shift.

Chevron agreed to build its operational village in Onslow. Chevron then came back to the government, after the fact, to argue about the safety of its workers with regard to that travel time after work. That must mean that Chevron had not addressed that safety factor for its workers when it made its original deal with government. It is very poor for Chevron to say, "In getting our approvals, we made the argument that we could do this, but, in hindsight, we would rather not do this." I have heard no explanation from Roy Krzywosinski or the senior

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leadership of Chevron about how it could possibly have come about that in the hours and hours of meetings and discussions that were had with senior Chevron people. Chevron never once raised the fact that it was incredibly concerned about the safety aspects of its workers having to travel from the plant to their accommodation in Onslow. I struggle with the fact that in all the conversations that I had directly with Chevron, that issue was never raised, and it was then raised after the fact. I have respect for the Chevron senior management, so I am sure there is a good answer for that. I hope that during this debate in the Parliament today, we can get the answer to that.

The distance between Karratha and the North West Shelf project is around 25 kilometres. The workers do that drive all the time. I do that drive all the time. It is a relatively short distance in terms of travel time. But, further than that, if we are concerned about the travel time between the workplace and home for the Chevron employees in Onslow, who essentially will be picked up by bus and transported, what are we doing for all the other workers across the state who have much greater travel times? People in the member for Collie–Preston's electorate drive the Coalfields highway all the time after their shifts.

Mr M.P. Murray: Just briefly, some people are driving back to Geraldton after a 12-hour night shift.

Mr B.J. GRYLLS: That is right. I was going to use the example of nurses who have to travel home after a 12-hour shift. Nurses do not have a bus to pick them up and take them home. They have to find their own way home after a long shift in a highly stressful and highly challenging role. Again, I would just like someone from Chevron to explain to me how, after the fact and after the agreement, it can make the case that there is a safety issue with the travel time of its workforce.

Another unintended consequence of this is the camp that Chevron built. The Wheatstone construction camp is in the industrial area of Onslow. It is called the ANSIA—the Ashburton North Strategic Industrial Area. The idea was that the only tenant of the ANSIA during construction would be the construction workforce. That camp would then be dismantled and it would become an industrial area and industrial activities could take place there. The request by Chevron to keep its workforce in the industrial area means that people are now essentially living permanently, when they are on shift, in an industrial area in Onslow. I use the comparison of Hope Valley and Wattleup. The government is compulsorily acquiring residents' houses in the buffer zone of the Kwinana industrial area so that clear separation can be kept between industry and residential living. One of the great challenges in the Pilbara is that we have never been too good on long-term planning. I think it is a great challenge for the future industrialisation of Onslow, for future businesses that want to establish in the ANSIA to participate in the oil and gas sector, that their application to put a noxious industry in the ANSIA now—

Point of Order

Mr C.J. TALLENTIRE: The member has made some interesting points but I think he should come back to the point of the bill.

The DEPUTY SPEAKER: Second reading speeches are quite wideranging, member for Gosnells. Continue, member for Pilbara.

Mr C.J. Tallentire: It has nothing to do with the bill at all.

Debate Resumed

Mr B.J. GRYLLS: I will respond to the point of order because I think it does have a lot to do with it. I am being asked today as the member for Pilbara to support the Barrow Island Amendment Bill, which puts in plan an agreement between the government and the company. It was agreed to during the negotiations to establish the company's oil and gas project. I am simply reflecting on the fact that another part of that agreement has since been changed by the company. I am seeking from the Premier some answers to those changes as I make my decisions on the bill before us. I think it is entirely appropriate that I do that—to seek those answers. It is a very important part of the project and important for the residents of Onslow; not only for Onslow but also the whole Pilbara and the sensible development of the north west. We are finding right across the Pilbara that decisions made by the government to help facilitate growth, decisions that were made both by the previous Labor government and by our Liberal-National government in the Pilbara, were made for all the right reasons at the time. They were made to facilitate growth and jobs and development, but, five to 15 years later when operational workers are living in a camp in the industrial area and people who want to establish industrial practices in the industrial area find that they cannot, it is a challenging outcome. People in Port Hedland are living in the industrial area of Wedgefield at the moment. It is incredibly difficult for local government and businesses to unscramble the egg once it has been scrambled. Now we are considering Onslow with a little hindsight. I fear that I have not yet been given a good reason why this decision has been made.

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In putting these deals together, Chevron made a range of promises to the local community focused on regional development. It involved LandCorp developing a 400-lot subdivision aimed at housing residential growth. Chevron is building 100 houses on that. Essentially, that subdivision remains vacant. A very large block of land that was meant to house the new Chevron village in the middle of Onslow will remain vacant. Chevron committed to building water and power supplies for the growing community. My latest advice is there will not be much need for the water supply because a major user was to be at the new village that was to be established in Onslow. Chevron had already built a desalination plant for the construction camp in the ANSIA. Tens and tens of millions of dollars of investment had been made to underpin the regional development of Onslow, but Chevron decided for whatever reason—it has not been able to give me a good one—to walk away from that and pursue a different strategy. Chevron is entitled to request that; it is entitled to make its case for that. I would just hope that that case can be explained to me so that I can explain it to others.

I just make the point to Chevron that it made commitments in and around regional development. It has been put to me that by not building the village in Onslow as committed to in the original agreement, there is a saving of more than \$100 million to Chevron's bottom line. I understand why it would seek to save money for its bottom line from a major project like that, but I am incredibly disappointed that Chevron chose to find its savings in the project that all of its pamphlets and flyers and public discussion said would be the centrepiece of the regional development enhancement and growth of Onslow when it originally proposed the project. All of the bits that Chevron said were going to be good for Onslow do not seem to be happening.

Mr F.M. Logan: Guess what? They also promised an awful lot of local content but they didn't deliver that either!

Mr B.J. GRYLLS: I am sure the member will talk about that as well.

It is very, very important that as a state, having gone through this massive expansion phase, we learn from those outcomes and learn what the end outcome is, as opposed to what was committed to at the beginning. We need to make sure we make good decisions around regional development so that in five to 20 years' time, we are not trying to unwind those challenges. I have no doubt that at some point the Chevron workforce being located in the ANSIA industrial area of Onslow will become a fundamental problem for growth and development. That decision will have to be revised and Chevron will have to move out. I do not know why we find ourselves in this situation of creating that challenge in the first place.

I finish my contribution by saying that that would never be allowed in Kwinana. It would never be allowed in Kwinana. The Pilbara, as it looks to grow and expand and develop, just wants to be treated the same as everywhere else. We want to be able to take advantage of the economic activity in our own backyard. We want residential growth. We want more schools and more hospitals. We want people to be able to live the wonderful lifestyle of the Pilbara. We just want to be treated like everybody else. I cannot for the life of me understand how housing a fly in, fly out workforce in the industrial area of town as defined can be a good public policy decision.

The Premier will have the opportunity in the debate to answer some of those questions. The government is doing the right thing. It made a commitment to Chevron in and around geosequestration and abatement. It is honouring that commitment. I call on Chevron—I am sure it has someone watching today's proceedings—that the Pilbara community would like it to honour its commitments to the community. Its massive project has had a big effect on employment and will deliver economic benefits to the state and the nation for many, many years to come. I would like to think that the home town of that project, being Onslow, would also be able to look like it housed two of the biggest oil and gas projects in the world. At the moment, I cannot say that. There are big, bare subdivisions with no houses on them. There are big, bare blocks where there was meant to be a village. It has scared off mum-and-dad investors who might have built a deli or a café or a small business to support it. Chevron has essentially told them, "If you live in town, we have a problem with your safety when travelling between the plant and town." That has put a big downturn on local investment. What should have been a wonderful opportunity for the growth of the community does not seem to be happening.

I actually think that the Premier was put in an almost impossible situation when Chevron raised the safety aspect with him. I would just hope that some commonsense can prevail and Chevron can relook at some of the commitments and decisions it has made since then and actually deliver the outcome. I believe that state and federal governments have done absolutely everything to facilitate the development of the Gorgon project on Barrow Island, a class A reserve, and the onshore Wheatstone project in Onslow. There has been an enormous effort across all government agencies to deliver that in the timeframes that Chevron needed. We had an enormous process to deliver the approvals to ensure that happened. The government has delivered to Chevron everything it needed to facilitate that project. The one thing that the Onslow community was set to receive from

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that project has been pulled off the table at the last minute. If Chevron wants to be a corporate citizen that is highly regarded in Western Australia, it cannot make decisions like that.

The Barrow Island Amendment Bill 2015 is an important part of that process. I look forward to hearing why some of those decisions were made by Chevron, as I consider my position on supporting the other side of the deal that facilitates the abatement of carbon in the long term.

MR M.J. COWPER (Murray–Wellington) [3.51 pm]: I would like to contribute to the debate on the Barrow Island Amendment Bill 2015. I am looking forward to the geosequestration of carbon at Barrow Island, because that would give us a clear idea of how the material will behave in a contemporary situation. It has been mentioned in this place that there was a plan to geosequester carbon captured from Kwinana, Alcoa's plants in Pinjarra and Wagerup, and Collie. It was to be piped to a location near Riverdale Road, which is to the north west of Harvey, and pumped into the ground 4 000 or 5 000 metres below the surface, in the Lesueur aquifer. When this project came to my notice, interestingly enough, it was labelled the Collie hub project. It was obviously looking at capturing the carbon in and around Collie, and when I made some enquiries about exactly where that was, I was told that it was south of Harvey, just north of Kemerton, which puts it solidly in the Murray–Wellington electorate. With further examination, I was able to get a more definitive location for the project. It was bordered on the south by Forestry Road, to the east by Government Road, to the north by Riverdale Road, and to the west by the South Western Highway.

Subsequently, the Lesueur aquifer was discovered to be much larger than the area that I have just described. As the project progressed, the capture area was expanded upon. It goes from the Darling fault, which, if you like, is at the foothills of the Darling Range, and runs north—south from Waroona to Benger and across to the coast. It actually goes out into the Indian Ocean off the coast and travels north. Initially, the project was looking at a fairly small area, and it was later found to be a rather large area. This area was chosen from three locations in the south west that were examined: Perth Basin, just north of Perth; an area over the Darling Range towards York and Beverley, and Lesueur aquifer. It was finally decided that the Lesueur aquifer would be examined, which is the area I have just mentioned.

The technology used in geosequestration was developed by Halliburton way back in the 1950s. This was the use of rigs to drill very deep into the earth's crust, through the various layers, to harvest gas using various techniques, including the pumping of liquids into the ground to cause the ground to crack, releasing natural gas. This is commonly known, I believe, as fracking. Over the years, various techniques have been used, and the companies involved have become quite adept at using and directing the drill rigs. The technology that is used is very interesting and intriguing. Geosequestration is not the same as fracking, but it is born out of similar technology, discovered by Halliburton.

One question that was of concern was what was actually under the surface of the ground. I remember driving around my electorate and seeing trucks rolling out big rolls of wire. The operators were putting out microphones and doing sounding. They thumped the ground, which would send a wave through the bedrock, which enabled them to map the subsurface. They started doing that in the area that I first described. It then came to the notice of the community that the company wanted to drill a test bore. A massive drill rig was brought in from up north somewhere. It was one of very few in Australia that have the capacity to drill that deep. A test bore was drilled to see what it was like under the ground.

A local consultation committee was formed, and I was able to have a representative on it. I selected an environmental scientist who has a good understanding of the hydrology of the area and has experience in that area. The impact that these activities might have on the local farms was of great concern to the people in that area. During the course of the process of the drilling and the reports back to the committee, the committee member reported to me the circumstances attending this project. One of the reports that came back was that the Lesueur aquifer is hypersaline; it is seven times saltier than the sea.

What is unique about this project will also apply to the Barrow Island project. Where this geosequestration has occurred in other parts of the world—the member for Cockburn touched upon its use offshore from Norway in the North Sea, and it has been done in the western United States, although on a smaller scale—the CO₂ was actually pumped back into a voided reservoir that previously contained oil. The oil had been extracted, and CO₂ was pumped into the voided well. Neither Barrow Island nor the Lesueur aquifer are voids. They are, as I said, hypersaline. They are unique insofar as they have a covering of basalt, which, I understand, is much harder than granite and has certain properties that the geologists have been looking for. The member for Collie–Preston touched on the major concern for my constituents, making the point that the people of Harvey were not particularly worried about it. I can tell him that, to the contrary, they were very concerned about it. We had a number of community meetings, where people were able to listen to the representatives from the CSIRO, the University of Western Australia and others about how this would happen. A farmer even came over from

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the Otways, and he had a chance to speak to some of the farmers about their concerns. There were a range of concerns, not the least of which was why we would embark on a project that would potentially interfere with arguably the most important domestic food producing area in Western Australia. I am talking about Harvey Fresh, Harvey Beef, the vast majority of our dairy industry and the Myalup coastal strip, which produces much of our vegetables. Forty per cent of our vegetables come from that area—potatoes, carrots, broccoli and the like. The concern was that pumping CO_2 into the ground would potentially cause the hypersaline water to come to the surface. If CO_2 escapes, it just goes back into the atmosphere. We know that CO_2 is omnipresent. As a young teenager, I conducted experiments by putting CO_2 into a tank and turning on the tap, which resulted in a liquid flowing out. Hopefully, it is golden and everyone can enjoy it. In this case we are concerned about CO_2 being put into the ground under pressure. If there is some leakage, it has the potential to push the salt water to the surface, rendering the farmers' operations virtually non-existent.

When it came to the discussion about who was responsible and who would pay, there were some grey areas that the then minister, Hon Bill Marmion, was unable to address. What will happen at Barrow Island will answer a lot of those questions that the farmers in my electorate were asking. Those questions that I was asking on their behalf will hopefully be answered by this process of putting it back into the ground.

I had the opportunity to speak in private with the member for Gosnells. He and I agreed that this will be a great debate, as we can sit down and discuss a range of issues relating to this process.

Debate adjourned, pursuant to standing orders.