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NATIONAL GAS (SOUTH AUSTRALIA) (GAS TRADING EXCHANGES) AMENDMENT BILL

Mr PEDERICK (Hammond) (16:27): I rise to speak to the *National Gas (South Australia) (Gas Trading Exchanges) Amendment Bill 2013*, and I commend all the comments of our shadow spokesman, the member for Waite.

I also want to make a few comments about fracking, because I was involved in the process 30 years ago in the Cooper Basin. Hydraulic fracturing (fracking, as it is commonly called) was first trialled in 1947 and this process progressed through to 1949 when Halliburton (which is an oil and gas field services company still operating, well and truly, today) performed the first two commercial hydraulic fracturing treatments.

As of 2012, right throughout the world, there have been 2.5 million hydraulic fracturing jobs completed in oil and gas wells, so this is not something that has just happened. There is a lot of discussion around unconventional gas and shale gas but, certainly from my understanding, fracking would have been operating in the Cooper Basin for around 40 years. When I was involved and worked for Gearheart Australia and we were shooting wells in 1983 and 1984, we worked alongside Halliburton to complete those jobs.

For the interest of the house, I will explain how it worked in those days. I am sure things have moved on a little bit in that time, but it would be fairly similar. Basically, you have a workover rig—not a drilling rig but a workover rig—over a gas well or oil well that is already cased and cemented and generally would not have tubing in it, that would take the flow of the oil or gas. We would turn up in our service truck and we would have four-inch guns that were loaded with armour-piercing slugs, I suppose you would call them. It was armour-piercing equipment that could shoot through 22 inches of solid steel. I know I am talking in Imperial measurement, but that just shows how old I am.

We would have these all loaded up in the workshop in Moomba and travel out to the appropriate well site. Being a 24-hour process, that could be any time of the day or night. The process was that we would run these guns down to the 10,000 feet or 3,000-plus metres of the well. You would gently touch the bottom of the hole, and it is interesting to note that at that depth, a cable could stretch up to 30 feet, or possibly 8 to 10 metres, so then you would have to work out the depths of where the

zone was to shoot the oil and gas with what is called a casing collar locator. That would get the engineer to sort it out exactly (once you calibrate those measurements) so that you could shoot on depth, as it is called. That worked very well.

The last thing you wanted to do in those sorts of jobs was drag up some guns that had not gone off because it could be quite explosive. Apart from the fact they could kill you, they could certainly disable you on the surface and tear your body in half at the very least.

That is what happened—you would shoot the well and pull the guns out. Halliburton would then have a series of tanks full of fluid and something called frac sand which is like a silica sand which is essentially very much the same shape sand particles. They would be pumped down under huge pressure using V12 and V16 Detroit GM motors—quite a noise I must say and sometimes they could have up to 20 of these motors linked together with one operator on one throttle to get the appropriate pressure up to pump this fluid down to fracture where the shot had taken place in the zone. That would then open up the fracture so that the well could have a far better oil and gas production. Generally, it works very well.

There are a lot of things at stake if you do not shoot at depth. I witnessed an engineer being sacked for shooting off depth. I was on the same job and there is a lot of concern, obviously, about possible contamination—whether it is groundwater contamination or freshwater contamination—and the last thing oil companies want (the last thing anyone wants) is shooting off site because when you are shooting oil and gas, you do not want to shoot water. Sadly for this engineer, he got his calculations wrong and he shot water and I would assume that that well would have had to have been plugged and recemented and reshot.

It can be done in other ways. We used to do what is called three tubing through tubing perforating where the tubing was already in place to take the oil or gas flow and this was mainly in oil wells in the Jackson Oil Field in Queensland near Noccundra and we would basically set up our equipment one day. The workover rig would be mounted over the well, we would shoot at the next and the rig would move. We would do another well and we did a series of wells over a period of time. So it can be done fairly quickly and sometimes the through-tubing jobs were just done on their own just to open up the formation without any further pumping of sand.

So it has been around a long time; it is not as if it has just loomed up in the last five years. There has been a lot of emotion, and I concur with the member for Waite's comments that, yes, we do need to get on with the job, we do need to be careful, and we do need to make sure we have the appropriate environmental management and the appropriate water management. But I can assure you—and I know very much from experience—the last thing people want to do is make a mistake in these jobs.

Certainly, in regard to geothermal work—and I know they have been doing this work in the Cooper Basin, just out of Innamincka, for a long time—there are various opinions about whether they will ever manage to calm the beast of geothermal up there at Innamincka. There has been hundreds of millions of dollars poured into that

project. I know for a fact that there have been many fracture jobs done on those wells. For any people who think that fracturing is not part of geothermal, well, they need to have a good look, because it is certainly there.

I was talking to a Halliburton hand, as they call them in the oilfield, last Saturday night and he said that Halliburton in the Cooper Basin recently had four fracture crews working around the place. I must say that there are quite a few people from my electorate—my next door neighbour works for Halliburton at the moment, and quite a few others have had the opportunity to either get off-farm income or get their main income from working for companies like Halliburton and others in the oil business, as I did for two years all those years ago.

We do have to make sure that the process is operated effectively and we certainly cannot have a process where hydraulic fracturing is taken out of the equation, because it is certainly a big part of making sure that the economy of this state gets going. As the member for Waite indicated, I think we are on the verge of a far bigger industry than what we already have in the oil and gas field in this state. I certainly hope that it can take the lead, as I think it will have to, now that the Olympic Dam issue has fallen over for the moment, and that it can generate some real income for the state.

In regard to the bill and the gas trading exchanges, the Standing Council on Energy and Resources took out a scoping and cost study for a gas trading exchange, and these are short-term supply markets for reallocation of gas between national market participants. This should lead to greater transparency in trading, allocation and price efficiencies. According to the bill, the process required will be voluntary for participants.

In October 2012, the Standing Council on Energy and Resources tasked the Australian Energy Market Operator to conduct a design analysis of the first proposed gas trading exchange at Wallumbilla in Queensland, and this would incur an implementation cost of around $1.4 million to $1.7 million to establish, and potentially an annual operating cost of $570,000. Most of the industry participants estimated that their annual cost to participate in the scheme would be around $100,000. There is an estimation that the on-flow benefits of trade would be approximately $13 million on an annual basis, and it is said that DMITRE claim that there will be a negligible benefit for gas prices as a consequence of the measure.

The bill seeks to amend the National Gas Law to facilitate the establishment of gas trading exchanges and create the rules and regulations by which they will be governed. It will give the Australian Energy Market Operator statutory functions to facilitate gas trading exchanges in their operation and their set fees. It will also outline minimum standards by which these exchanges will operate. While the first exchange will be based in Queensland, the regulatory framework will extend to future gas trading exchanges.

There was quite thorough consultation with industry, and some of the industry were a little bit reluctant at the start. However, from the consultation that the member for Waite had, they have all indicated that they are now comfortable with the bill. The issue is that if this measure was not taken, if we did not have these gas trading

exchanges open up, we could see that by 2020 it would provide for only 10 per cent of gas, and eastern and south-eastern Australia would only be able to operate it within the market.

The Australian Energy Market Operator will be governed by the rules, and, in effect, the state government and state government regulatory agencies will refer powers to these national arrangements through the Australian Energy Market Operator. I think this will certainly open up the trading for gas throughout the country, and it is something we always have to be mindful of. I am always intrigued about how cheaply we sell gas for overseas.

I know that is certainly in a bulk arrangement, but when you compare that price to what we have to pay at home you wonder what goes on when we source so much gas from Cooper Basin. This is a very worthwhile bill to make sure we get the trading right. I want to reiterate that we must keep on with our work for the prosperity of this state, to make sure that the drilling and opening up of our oil and gas reserves go on for our future prosperity.

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