

**ECONOMICS AND INDUSTRY  
STANDING COMMITTEE**

**INQUIRY INTO SAFETY-RELATED MATTERS  
RELATING TO FLNG PROJECTS IN AUSTRALIAN WATERS  
OFF THE WESTERN AUSTRALIAN COAST**

**TRANSCRIPT OF EVIDENCE  
TAKEN AT PERTH  
MONDAY, 10 NOVEMBER 2014**

**SESSION TWO**

**Members**

**Mr I.C. Blayney(Chair)  
Mr F.M. Logan (Deputy Chair)  
Mr P.C. Tinley  
Mr J. Norberger  
Mr R.S. Love**

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**Hearing commenced at 2.31 pm****Mr STEPHEN PRICE****Branch Secretary, Australian Workers' Union, examined:**

**The CHAIR:** On behalf of the Economics and Industry Standing Committee, I would like to thank you for your appearance before us here today. The purpose of this hearing is to assist the committee in gathering evidence for its inquiry into safety-related matters concerning FLNG projects in Australian waters off the Western Australian coast. You have been provided with a copy of the committee's specific terms of reference. At this stage I would like to introduce myself and the other members of the committee. I am the Chair, Ian Blayney, and with me is the Deputy Chair, Mr Fran Logan, and Shane Love. The Economics and Industry Standing Committee is a committee of the Legislative Assembly of the Parliament of Western Australia. This hearing is a formal procedure of the Parliament and therefore commands the same respect given to proceedings in the house itself. Even though the committee is not asking witnesses to provide evidence on oath or affirmation, it is important that you understand that any deliberate misleading of the committee may be regarded as a contempt of the Parliament. This is a public hearing and Hansard is making a transcript of the proceedings for the public record. If you refer to any documents during your evidence, it would assist Hansard if you would provide the full title for the record. Before we proceed to the inquiry-specific questions we have for you today, I need to ask you the following: have you completed the "Details of Witness" form?

**Mr Price:** Yes.

**The CHAIR:** Do you understand the notes at the bottom of the form about giving evidence to a parliamentary committee?

**Mr Price:** Yes, I do.

**The CHAIR:** Did you receive and read the information for witnesses sheet provided with the "Details of Witness" form today?

**Mr Price:** Yes, I did.

**The CHAIR:** Do you have any questions in relation to being a witness at today's hearing?

**Mr Price:** No, I do not.

**The CHAIR:** Did you have an opening statement you wanted to make?

**Mr Price:** Yes, a brief one if I can.

Firstly, I would like to take the opportunity to thank the Economics and Industry Standing Committee for this opportunity to put our position forward regarding concerns over safety on FLNG projects. The AWU's primary concern is in relation to this new technology that is, I suppose, vastly unproven and still developing. A lot of our concerns are really based on presumptions that we need to make about possible scenarios, as there is not a great deal of actual information out there for us to, I suppose, satisfy our own inquiries as to what has been dealt with, what are some of the possible scenarios and how they are met.

We have a number of concerns in regards to regulatory considerations, and we have a number of concerns regarding the suitability and capacity of NOPSEMA to monitor the safety associated with one of these types of facilities. We have concerns over structural design, considering we have taken what normally would consume a fairly large footprint on terra firma and sort of compacted it into this extremely large floating facility; but where we normally have the benefit of space to provide

added protection within an onshore facility, that ability has been removed when we look at floating technology. So it comes up with possible scenarios which we actually have not had to consider on shore and which we do need to consider offshore.

The operational side of it in regards to protection of employees—once again based on the compaction of the actual worksite—is a concern. On top of that, we also now have an accommodation village as part of this overall structure, where, once again, on the mainland those sorts of exposures are not there. We have a complete reliance on, I suppose, aerial support for removal of people off the facility should that be required. Not only do we have a complete reliance on aerial support to do that, we have an extremely remote location that has a lot of logistical issues associated with actually the aerial support getting to and from. An extension of that is that we are actually going to be relying heavily on a refuelling station at Lombadina Airport, which in itself has some restrictions in access due to weather constraints. As you most probably know, there is a sealed section of road linking communities around Beagle Bay north up to Arnhem point that actually gives them access to the airport during wet weather season, but there is about an 80-kilometre section leading to it that is unsealed and impassable during certain times of the year. So there is an extension of questions relating to fuel supplies and availability at that particular facility, in addition to what they normally carry for the local communities; and, once again, depending on the size of the situation we are trying to deal with, how do you quantify what is going to be adequate in that particular space?

Getting back to the regulatory part, the other concern is the safety case regime that is applied on offshore facilities. This a very structured approach that refers purely to technical solutions to identified issues. From my union's perspective, there is a shortcoming in the legislation applying to it because it does not actually take into consideration corporate culture. So when there is an incident and it is investigated, it normally comes back out to be a technical issue, which you then can almost direct the cause back to either being mechanical or a human-type error. We do not believe there is enough scope within the legislation to actually take that one step further and examine the corporate culture regarding safety, and that has a big impact on a lot of behaviours that employees undertake on the actual job.

That all said, when we are talking about the operational side of it, we have learnt a lot onshore through past incidents, fortunately, where when we do have an incident, we investigate them very thoroughly and that then allows us to improve the safety and operations of future facilities. But when you look at what some of those improvements have been over the years in regards to blast protection for control room operators, and removing people away from particular areas that may have a higher risk than others, how you take that and, once again, apply it to a restricted working area is something of concern. You rely heavily on one particular piece of equipment out on these vessels, whether it be an FLNG or an FPSO or something, to get people on and off, and that is actually the helideck. We have had situations in the past, and there is actually one at the moment, where the helideck gets damaged and you are then in an extremely vulnerable situation with how you get people on and off just through normal operational requirements, let alone there being some sort of emergency going on. Montara was an issue in that regard as well.

[2.40 pm]

So, there are a lot of unanswered questions, really, because we do not know a great deal of information regarding this. You can assume that all the actual operational requirements regarding processes and procedures will be in place and should be up to speed, because essentially you are just taking an onshore LNG train and sitting it on a big floating facility. You would think that the operational part of it should actually be pretty well managed, but it then gets down to the main concern being about the situation when things do not go to plan. So, there are a lot of unanswered questions. This, of course, is the first of what could be multiple facilities based on this design, so it

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is extremely important that we get this as close to perfect as we can for future ones. This is really where the main concerns of the union are being driven from.

**Mr F.M. LOGAN:** Thanks very much indeed, Steve. Can I just ask you to talk, if you can, about experiences of the AWU in relation to incidents that have occurred offshore already, responses by companies to the incidents and workers' responses to those incidents. We heard from Ian Bray from the MUA who talked about a construction barge in, I think, the gulf in the Kimberley. During Cyclone Billy it was not able to evacuate or chose not to evacuate its workforce off the construction barge prior to the cyclone, with the cyclone virtually hitting the barge and breaking all 12 anchors on the barge—if it had not been motorised, it would have been drifting with over 300 people on board. He also talked about the company's responses to that. That was an example. Obviously, you were involved in Montara as well. Along with Montara, do you have any other experiences you would like to share?

**Mr Price:** Weather is something I almost did not raise, but it almost goes without saying. This facility is being built to withstand category 5 cyclones, which they are telling us it is, but that is still an unknown factor. That is a classic example where we had something we thought was quite secure and able to withstand the weather conditions and it failed. This thing is absolutely enormous and it is very difficult to tell what a severe weather situation will actually do to it. There have been others regarding failures due to weather or other situations. Montara is probably the most recent significant one where there was a wellhead blow-out that subsequently caught fire. There was a lot of confusion and difficulty in getting the guys off that particular platform as quick as possible. That was a similar situation where it was fortunate that there were a lot of supply vessels not too far away, so people could actually be evacuated into vessels to get them away, because once you get a blowout, there is a high risk of fire and a subsequent explosion and then you are very restricted in the types of activities you can undertake anyway in regards to evacuating people. Montara was a fairly steep learning curve and unfortunately that was probably one of our worst environmental disasters we have had here and fortunately it ended a lot better than some of the others. There have been circumstances on the Bass Strait. The Bass Strait is probably the nearest comparable facility we have regarding something that is basically going to be fixed in position for an extended period of time. I think Bass Strait has a good 20 years-plus under its belt now. What we are seeing out there is a lot of early deterioration and corrosion of equipment based on its situation and exposure to the elements. The process itself is naturally destructive; we know that, so you can plan your maintenance for that particular approach, I suppose, for the processing facility, but the external and additional influences such as weather exposure is something that needs to be taken into consideration. What we have actually seen occur around Bass Strait is a significant increase in the number of unexpected leakages and failures of particular pieces of equipment, and piping as well. Once again, everyone thought they sort of understood the rate of denigration of the equipment, but they obviously have not taken into full account the effect of those sorts of atmospheres on what is really high-tech equipment. Apart from failures on particular metallic pieces of equipment, there have been issues regarding electronics as well. I suppose in these sorts of industries the number one approach to safety is actually the removal of individuals to the exposure of potential hazards, so a lot of it is remote as much as possible, but as the facility ages, there is an increased likelihood of failures.

Apart from that we have been quite fortunate with the other comparable industry in regards to the FPSOs over time. They have been around and we are sort of heading into the next generation of FPSOs now with Woodside's *Okha* being one of the newest designed and built. Fortunately, the product is not quite as volatile as we are dealing with here, from my understanding, so I suppose the rate of incident has not been anything of a high concern to us.

**Mr R.S. LOVE:** I think what I am wondering is a couple of things about your union and what you see your involvement is in regards to FLNG. With most of the workers operating on the platform or

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on the *Prelude* vessel, for instance, would you expect that they would be members of your union or are they covered by your union? What is your role anticipated role in that production facility?

**Mr Price:** My union does have the constitutional coverage of pretty much everyone associated with the hydrocarbons industry—so all the operators, the maintainers, constructors. We sort of cover the field and have the ability to represent the industrial interests of all of those people. We have a very strong involvement in all of any sort of refining that has a hydrocarbon element to it—so Woodside, BP, all of the offshore, the Chevrans, Inpex, Bass Strait over on the east coast. We have a strong involvement and a strong understanding of the working conditions within the industry right across the country. I suppose South Australia would be a bit upset if I left them out with Moomba and places like that as well! We certainly have a strong interest and we have a strong understanding. We would see our involvement in regards to representing the workers' positions and their rights on the job, whether that be through an enterprise agreement, should they wish to negotiate one, or just in general representation of members who work out there, whether it be a work issue or a safety issue that they need assistance with.

**Mr R.S. LOVE:** You said earlier today that you had some concerns, I think, about the structure of regulation in the country based on a safety case type of emphasis. That is the standard that is applied in other jurisdictions, is it not? How is that different than, for instance, the UK, which also has safety case types of scenario building? Why are you uncomfortable with that in this particular jurisdiction?

[2.50 pm]

**Mr Price:** The safety-case regime which has been adopted in regards to offshore, and which is currently under consideration for onshore mining as well, from our perspective is a good process, but it does have some shortcomings, and part of the shortcomings are some of the restrictions with regards to the legislation and what they look at. Once again, as I previously mentioned, they miss taking into consideration a company's culture and approach to safety on the job. A lot of the times they are also prepared as part of an approval process, so they are done without the involvement and engagement of their employees. Unfortunately, what we have seen in the past and our view on the regulator is that they are a little bit under-resourced and inadequate in their assessment and auditing of some of these safety cases that have been put in place. There needs to be a regular review and updating of them, and I do not think there is a requirement at the moment for that to occur. Historically, what we have seen is that they are quite similar, so once a particular safety case is done for one type of vessel, the next one is very similar, and they all contain similar information and responses within them, whereas this new facility, once again, is brand new; there is no history there, as far as we are aware, that we can actually learn from. If we are going to allow—which the legislation does—the company to identify the issues they think are going to come up and their responses to it, then we are almost abrogating our responsibility to the company to put something in place, and should something go wrong, then of course we will be able to hold the company accountable for that, but, to me, we are missing a golden opportunity to ensure that that process is done with a little bit of a, I suppose, higher degree of inspection to ensure that we get the best possible outcome from the beginning. To do that, it would involve the employees working on the facility. They have started recruiting for this particular facility; they are recruiting experienced operators from other facilities around the country. So there are people who are coming in with a wealth of experience behind them, and there is a lot of jostling between all the companies that are looking for operators at the moment. They need to take advantage of that. They need to, I suppose, capture the experience they have got. Even though this is a new vessel, they will have a lot of years of experience within the operational crew working for the company on this particular facility, being specifically the one that we know is coming up. But the involvement of the workers, I think, is a shortcoming in the requirement.

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**Mr R.S. LOVE:** On that point, the committee travelled to Korea and visited the shipyard and met with a number of Australians who are over there at the moment familiarising themselves with the vessel as it is being built, and they did appear to have the view that they were being involved in setting up some of the safety systems around the operation of that vessel. Have you had any discussions with any of those people directly involved with the FLNG vessel at the moment?

**Mr Price:** Yes, we have.

**Mr R.S. LOVE:** So despite what appears on the surface at least from our observation to be some strong involvement from those people in the development of the processes, do you still harbour the view that they are not being listened to?

**Mr Price:** No. It is the approach that all the organisations take when they are building a new kit or a new facility. They get the operators involved quite early. They will send them off and train them on simulators or equivalent pieces of equipment somewhere around the globe. They will take that experience they have and seek their input into putting in place the operational processes. But whether that then actually translates into the information that is captured within the safety case that they have to present, I am not convinced.

**Mr F.M. LOGAN:** We heard a minute ago from ConocoPhillips, who indicated that they do collaborate with their workforce and seek input directly into their safety case development. That is a claim by ConocoPhillips. Whereas, we also heard last week from Ian Bray of the MUA, who also expressed exactly the same views as you have done about the safety case approach and the need for greater regulation over safety cases. But when questioned, Ian said that, basically, they have had no input into or response from Shell in their attempts to have discussions over the *Prelude* and the issues concerning them about *Prelude*, including, of course, the safety case and safety issues. Has that been the same experience for yourself?

**Mr Price:** I have had one meeting with Shell. I should be able to remember his name. It is the new CEO.

**The Principal Research Officer:** Andrew Smith.

**Mr Price:** Yes, Andrew Smith. He met with me and basically took me through a broad outline of what the facility was. He did not engage in any conversation about anything apart from showing me the video that is on YouTube or whatever. Since then, I have made a number of approaches to Shell to meet with them and have a conversation about where they are going regarding their employees and development of the safety case and stuff, but they have not engaged back.

**The CHAIR:** You have quite a few members who work on FPSOs, is it?

**Mr Price:** Yes.

**The CHAIR:** What can you tell us about what you see as the specific challenges that people working on FPSOs face in the environment? Is there anything you see in that that is specific to Australian waters?

**Mr Price:** It is an interesting occupation. What we have seen in regards to the opportunities for people to get involved within the offshore industry is that there is a significant increase in that opportunity. Go back quite a number of years ago, and they were almost a family position—you know, your dad had it, and you had to wait until he retired before the son would get it. Very few people were able to get offshore. Now we see a lot of opportunity and we see quite a bit of movement between FPSOs and people on the FLNG and people coming back onshore with just LNG. So there is a creation of opportunity, and you see a movement from industry to industry. There is almost a hierarchy of preferred candidates coming from control room-based industries within LNG and control room-based industries from outside. The upshot is we are seeing people get exposure to a working environment which they may not be used to, and which they may not be suited to as well. Unfortunately, people make the wrong assessments about the opportunities that

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employment gives them. These guys work a varying roster. Some work even time; some work Norwegian.

**Mr F.M. LOGAN:** What is Norwegian time, again?

**Mr Price:** A Norwegian roster is basically three weeks on, three weeks off, three weeks on, six weeks off, which includes all your annual leave and everything built into it. It is a very isolating workplace. You are a long way out at sea and there is nothing around you but blue water, so the isolation of this and the duration of the rosters that are required to work there are quite challenging. For the majority of people that is fine, because this is an industry that they have wanted to make a career out of, and they have done that, and it has in turn given them a very good life from that. But there are circumstances where some people see the opportunity but, unfortunately, they are not well suited to it; so there are issues in that regard. The FPSO industry, so to speak, has been quite a stable one; before the advent of floating LNG, there was movement amongst FPSO people and amongst vessels. And as we are seeing, I suppose, an increase in the production capacity around the west coast of Australia, there are more FPSOs out there than we have had before as well. So, apart from that as being one of the main areas of concern, the rest has been nothing unusual; if that makes sense.

[3.00 pm]

**The CHAIR:** How many people in Australia would be working on that Norwegian roster?

**Mr Price:** It would be difficult to give you an answer on that. There are actually quite a few, because it is not only the offshore industry that use it, a lot of maritime companies use it as well.

**The CHAIR:** And that is adopted and that would be the system on that vessel, would it? Would everyone be working on that roster or not?

**Mr Price:** I do not know. This is one of the things we are unsure of, what the actual work roster out there would be. There are different variations of that and it really comes down to what the company is prepared to offer to make it that little bit more attractive to something else, which is what seems to be going on at the moment.

**The CHAIR:** This may seem a funny question, but is that actually the standard that they do most of their work in Norway on?

**Mr Price:** Yes.

**The CHAIR:** So that is pretty much industry standard?

**Mr Price:** Yes.

**Mr F.M. LOGAN:** Stephen, can I just ask you about the issue of cyclones and what happens in cyclones? With the existing FPSO facilities, a cyclone comes along, they unhook, stand offshore and ride the cyclone out. Therefore by and large there is no de-manning really. There might be some, depending on what is happening but by and large there is no de-manning, but that is because they are unhooked. We have just heard from ConocoPhillips that, in the event of a serious incident on their permanently fixed FPSO vessel and of course their large central processing facility, they would evacuate if they were likely to be hit by a cyclone. With the *Prelude* FLNG, it is not going to be unhooked—obviously it is permanently moored—and Shell are saying that they are not going to de-man. Do you have any comments on that? While you do it, I have to go and take this call.

**Mr Price:** Yes. You would not be able to move this thing in a hurry. It is enormous and once it is anchored into place with a significant amount of anchorage, even just coupling and decoupling it, I think would be a challenge in itself. Containing people within a cyclone, I think, is a challenging environment. In pretty much every situation that we find ourselves exposed to cyclones we have very rigid cyclone procedures in place, 99 per cent of which are evacuates; they are evacuated early. It is very rare that we actually get caught where we have to keep people contained within some sort

of shelter within a workplace at the moment. Unfortunately, we had some bad instances of that occur recently with cyclone George a few years ago onshore. I do not doubt that you could actually construct a shelter on a vessel that would withstand a cyclone; you know, we can pretty much build anything these days. The issue with that would actually be more about the psychological concerns of the employees that are actually stuck out there in the middle of it, because it would be quite a torrid time. If you imagine you are on this floating thing which would actually be getting buffeted. Even though it is enormous, the weather would be extremely severe. You would be stuck in a place where you know you actually cannot get away from if you need to. So I think the challenges for managing the employees during that time would actually be the number one concern for that. The preference, of course, would be early evacuation, you know; go through a stage of starting to demob and de-man and put the place into an operational standard; whether it has a cyclone sort of watch, I do not know. But I would be concerned about leaving people out in the middle of a cyclone.

**The CHAIR:** Have you got any thoughts on what the state should be providing onshore in terms of infrastructure and where they should be in terms of preparedness and thinking about—obviously this *Prelude* is the first of “design one, build many”—what we should have on the coast?

**Mr Price:** I think we are going to need more staging stations to begin with. The justification behind FLNG is actually to enable the exploitation of stranded resources; ones that are not viable enough to actually build a pipeline and process them back onshore. Unfortunately, the original justification for it has been used against us because it quite clearly could have been piped back onto shore and processed. But the decision was made not to, and we have the same issue with Browse as well. So there needs to be some sort of investigation taken into where the potential future, I suppose, uses of FLNG are going to be because you are going to have to rely heavily on helicopters and aerial support to get people in and out. But for the trip out to *Prelude*, for example, is the fact that they fly from Broome to Lombadina, as far as I am aware, and they refuel at Lombadina, and that will give them enough to get out to the facility; and then on the way back they have to refuel out there and come via Lombadina and back to Broome. So they are pushing the extent of the capacity of the planes, or the helicopters I should say. So whether there actually needs to be a floating staging platform or something for refuelling somewhere is worth considering. But the fuel issue is a major one as well; the supply of adequate fuel. As I mentioned, Lombadina has weather restrictions based on the access to it. But even in the production of the fuel, it is quite reasonably well known that there is certainly a scaling back of our refining capacity across the country and there are only a few places that actually make the required fuel, as far as I am aware, and if we have to rely on imported fuel storage facilities, then we need to make sure that we have adequate storage capabilities for the required amount of fuel. Whether that is imported or produced domestically somewhere, you need to sort of look down the chain to make sure that we have that. There is also the potential for an incident. In any incident, the chances are that it could be quite serious, which would mean it would involve multiple casualties, so we need to have the ability to treat people as soon as practicable until we get them back on the mainland and they can get into a proper, I suppose, intensive-care facility. As it is, if you are coming from the north west, you have the choice of going to Broome or across to Darwin, if you so choose, or back to Perth. But either way you are looking at extensive periods of time in travel to facilitate that. So, there could be the requirement for increased medical facilities or an upgrade of some of the ones we have up and down the coast. That is purely just relating back to the safety requirements.

**The CHAIR:** This sort of flows on a bit from what you were just saying: what do you think about how the industry is regulated at the moment, and how do you think that could be enhanced?

[3.10 pm]

**Mr Price:** The industry is controlled by extremely large multinational companies who seem to almost manage what is required of them, if that makes sense. The regulator, NOPSEMA, I think



there was issues with the amalgamation of the different departments into one large body. I think they should have been kept separate to look after safety and look after the environment. But by bringing them together, I did not see any massive expansion in the capability of the regulator and I did not see any expansion of the capacity for them to carry out their required function on a larger scale as one department. Even though it has been here for a while, I think it is always good to undertake reviews and assess the positives and the negatives of these things, and we are probably at the point in time where what we are seeing heading down towards the north coast of WA is actually almost a step change in the industry in regards to the technology that is being employed and in regards to the scale of the facility that is being employed, and where the future is actually heading regarding this particular type of approach to developing the resources.

**The CHAIR:** Yes. Does your organisation have some suggestions of how they think they could be regulated differently or what they would see as better?

**Mr Price:** It is an interesting question, because part of the approach is actually not to be prescriptive. We do have issues in other industries relating to safety requirements where—when you become very prescriptive about what the requirement is, that is what people do; so there may be other things which contribute to an outcome, but the prescription and the regulatory requirements may not lead to that being understood or dealt with. The safety case gives the companies probably a bit more freedom to identify issues and responses to it. I think there could be a bit of a mix regarding a little bit more prescription, but also still maintaining the freedom for the companies to identify and provide issues and solutions for their particular requirements. Any specific things—it is something that is sort of a work in progress. Because of the nature of the industry and the relationships with NOPSEMA, we do advocate that there needs to be some sort of review, but at this stage I do not have any of the actual particulars that we are prepared to sort of talk about as to what we think would help enhance that process.

**The CHAIR:** Do you have an opinion on who you would see does this best—what country?

**Mr Price:** I think you would have to look at, I suppose, the areas that have actually—when you are talking FLNG, it is always very difficult because there is nothing —

**The CHAIR:** I meant generally offshore.

**Mr Price:** Offshore generally, the UK has always been very strong on it. Unfortunately, there was the *Piper Alpha* incident early on, which they then learnt a substantial amount of information from subsequent to that. They sort of set, I suppose, almost a benchmark going forward about changes within the industry and different ways of dealing with similar situations

**Mr F.M. LOGAN:** You referred to the Montara incident and the response to the Montara incident and the authority's failure in being able to respond effectively. You also touched on, Steve, the logistics of servicing *Prelude* by helicopter. Can you comment on a number of issues about the jurisdiction of Western Australia—we cannot talk about, obviously, the Northern Territory and what they have done since Montara—because this is an area that obviously the committee is looking at, and that is: what capacity does Western Australia have in responding to incidents offshore? For example, in Western Australia the authority responsible for search and rescue is WA Police, and there is no way WA Police can look for people who have fallen over the side of *Prelude* two and a half hours by helicopter off Broome, and they do not have the facilities in Broome anyway to do that. The industry's response to that, by the way, is that there is going to be joint funding of a dedicated search and rescue helicopter. But, then again, it is not just the helicopter; you have got to have support facilities and various other things as well. Can you comment also on the issue of fire offshore and the capacities to respond to major incidents of fire, such as a *Piper Alpha*-type of incident, and any other areas of capacity that we do not have here in Western Australia should there be a severe incident on a facility offshore, not just *Prelude* but other facilities as well.

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**Mr Price:** It is actually interesting that you talk about the Western Australian jurisdiction; it is three nautical miles off the coast, and the rest we are in commonwealth. We had a brief discussion about some of the other infrastructure stuff that we may require up there. Those sorts of things certainly come into it. We have been very fortunate that Montara is probably the closest thing we have had to a catastrophic failure of any of these facilities, and that in itself being a fixed platform, I suppose it was fortunate that there was some construction work going on, because the only thing that saved Montara was that there was construction work going on not too far away, and there were vessels in the area—pipe-laying vessels and everything associated with it—and they were able to get a quick response to it. It may have been a completely different story if the circumstances were different there. I do not think we would have the capacity, to be honest, for any major incident on any of our hydrocarbon processing facilities. I think if BP blew up, we would struggle, and if something went wrong at KGP for Woodside, the same thing. If we are talking a very large quantity, multiple incident-type occurrence, which when these things explode is exactly what happens, I think we would struggle anywhere out of Perth to be able to deal with that. That is one thing: should something happen, for example, we will need to go and find someone. But the second part to that is: once you do find someone, what happens after it? What is the flow-on? If there is a major occurrence, what happens? What do we do when we are talking a significant number of casualties? That was one of the earlier points in regards to evacuating people off the facility. I do not know how many suitable helicopters we have up and down the coast in the north flying out to all the current platforms, FPSOs, versus now we have got the additional requirements with what Shell is proposing. They are a particular type of helicopter and they have a particular sort of capacity. It is not any helicopter you could grab and expect them to go out and take part in one of these activities. So you can follow on from any sort of particular point and ask: What happens now? What happens now? What happens now? I think we are going to be coming up short of an acceptable answer when you get to the end of those sorts of analyses.

**Mr F.M. LOGAN:** Following that, you make a good point about the three-mile jurisdiction of Western Australia, because that is always a point of contention: who is expected to respond to those issues offshore? With Montara, it was in commonwealth waters. Since Montara, has the commonwealth to your knowledge put anything in anywhere across northern Australia to respond to those issues again?

**Mr Price:** Not to my knowledge.

**Mr F.M. LOGAN:** So they would effectively be relying back on the state, even though it is not within their jurisdiction.

**Mr Price:** I am not aware of any particular additional infrastructure being put in place to help deal with a reoccurrence of that.

**The CHAIR:** I would like to thank you for your evidence before the committee today. A transcript of this hearing will be forwarded to you for correction of minor errors. Any such corrections must be made and the transcript returned within 10 days of the date of the letter attached to the transcript. If the transcript is not returned within this period, it will be deemed to be correct. New material cannot be added via these corrections and the sense of your evidence cannot be altered. Should you wish to provide additional information or elaborate on particular points, please include a supplementary submission for the committee's consideration when you return your corrected transcript of evidence. Thank you very much.

**Hearing concluded at 3.20 pm**

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