

**ECONOMICS AND INDUSTRY  
STANDING COMMITTEE**

**INQUIRY INTO THE ECONOMIC IMPLICATIONS  
OF FLOATING LIQUEFIED NATURAL GAS OPERATIONS**

**TRANSCRIPT OF EVIDENCE  
TAKEN AT PERTH  
MONDAY, 21 OCTOBER 2013**

**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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<008> D/K [11:29:55 AM](#)

**Hearing commenced at 11.30 am**

**Ms KAYLEEN EWIN,**  
**Vice-President, Sustainable Development, Communications and External Relations,**  
**ConocoPhillips Australia Pty Ltd, examined:**

**The CHAIR:** On behalf of the Economics and Industry Standing Committee, I would like to thank you for your appearance before us today. The purpose of this hearing is to assist the committee in gathering evidence for its inquiry into the economic implications of FLNG. 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 other members of the committee present. I am Ian Blayney, the member for Geraldton and chair of the committee; Hon Fran Logan, who is the deputy chair; and our other members are Jan Norberger and Peter Tinley.

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 document 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?"

**Ms Ewin:** Yes, I have.

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

**Ms Ewin:** Yes, I do.

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

**Ms Ewin:** Yes, I have.

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

**Ms Ewin:** No, I do not.

**The CHAIR:** Do you have a statement to make?

**Ms Ewin:** We are quite comfortable that the written submission we made speaks for itself, so we are quite happy to go straight on to questions.

**The CHAIR:** Okay.

**Mr J. NORBERGER:** In your submission, obviously, we note that FLNG is one option that is currently under consideration for developing the Greater Sunrise field. Can I just ask: what discussions have you had with Timor-Leste in relation to using FLNG, and is this something that is welcomed by Timor-Leste?

**Ms Ewin:** The joint venture has had extensive discussions with Timor-Leste over the years. At this point in time there is not alignment around the preferred development concept, and there also is not

alignment around the treaties, and interpretation of the treaties, that support that field. So at this point in time I guess we are waiting for the governments to reach a point of alignment between themselves, and then we will have further discussion on the development of the field.

**Mr F.M. LOGAN:** How much work has been done by ConocoPhillips into the use of FLNG and the technologies of FLNG for the purposes of Conoco's involvement? If Conoco is involved in the future in FLNG, will you be using similar LNG processing—the Optimized Cascade Process—that you currently use for some of your LNG onshore?

**Ms Ewin:** ConocoPhillips has probably had two avenues of work in relation to floating LNG. The first was, as you mentioned, on the Sunrise field where, as a non-operator of that field, we have reviewed third party technology from Shell and got ourselves comfortable with the proposal put forward to the point of having it as a preferred development concept within that joint venture. In addition to that, as you mentioned, ConocoPhillips has its own licensed Optimized Cascade technology on onshore LNG plants. What we are currently doing is that we are undertaking a body of technical work which we believe will take us up to what we call proof of concept, which is really taking the existing technology and process that we have and marinising it, and we believe that we will be at proof-of-concept stage later this year. So that will be then, we are hoping, one more development option we can use to assess on relevant fields.

**Mr F.M. LOGAN:** I am glad you used the word “marinising” rather than “marinating”!

**Mr I.C. BLAYNEY:** Which is what it might do in oil.

**Mr J. NORBERGER:** Kayleen, we had the opportunity to visit the Darwin LNG plant, which we are very appreciative of. It was a very professional-looking outfit and the like. In ConocoPhillips' opinion, would you say that the Darwin LNG plant was a success?

**Ms Ewin:** Yes, absolutely.

**Mr J. NORBERGER:** Obviously, when the Darwin LNG plant was developed, it was developed, you could argue, during the peak of some of the recent construction activity. Did it come in on budget?

**Ms Ewin:** It was a bit before the peak, so that was back in 2003. Yes, it did come in on budget.

**Mr J. NORBERGER:** Okay. So what did ConocoPhillips do to actively ensure that it came in on budget?

**Ms Ewin:** We have very robust internal processes which are applied to all projects—a many-staged or step process to go through that. Some of it is very difficult probably to explain succinctly, but it is the strength of the process, I think, and also a strong awareness of the local market you operate in—a combination. As I said, it was before the peak.

**Mr J. NORBERGER:** Do you think that contributed to it, the fact that it was before the peak?

**Ms Ewin:** Yes, I believe so.

**Mr P.C. TINLEY:** Just bear with me for a second. Conoco has actually got some pretty good recent experience in terms of you doing onshore facilities—obviously, in Darwin. How far advanced are you in the Canning Basin?

**Ms Ewin:** In the Canning Basin we are in the exploration phase, so we have now drilled two wells, and we are planning further drilling next year. But it is very much in the exploration phase, still working out whether there is a field there or not.

**Mr P.C. TINLEY:** In terms of commercial viability, given how you might farm that in and how and to what facility, is that still too early to say?

**Ms Ewin:** Far too early to say.

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**Mr P.C. TINLEY:** Okay. I just wanted to understand that background because you have got pretty good recent experience as a business and what is commercial in your terms and what is not commercial, but you are quite clear in your submission that you feel that FLNG generally is now probably more commercial than an onshore facility. Would that be a fair statement?

**Ms Ewin:** The work we have done to date does show that it has the potential in certain fields to significantly reduce the up-front capital costs, and the up-front capital costs are one of the key drivers in whether a field can be economic or not. I will clarify that. I mentioned it as in certain fields; we do not think floating is a blanket solution for all field development.

**Mr P.C. TINLEY:** Sorry; if I can just interrupt: in that case, what fields do you think that FLNG is suitable for and not suitable for? Is it general characteristics of the field?

**Ms Ewin:** General characteristics. Lower liquids will generally be more suitable for a floating development further away from existing infrastructure. So the presence of existing infrastructure can make, and often does make, in our view, onshore development just as competitive.

**Mr P.C. TINLEY:** So brownfield.

**Ms Ewin:** Brownfield, yes. Our view in general is that we feel that each opportunity should be assessed on a case-by-case basis. The characteristics of the field and the associated infrastructure in the region should be determining a development decision, and with those characteristics around a development decision, that will encourage the greatest amount of investment.

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[11.40 am]

**Mr J. NORBERGER:** Kayleen, you mentioned before that the capital expense to get a field up and running is a key driver, and I take that on board. Does FLNG present a higher operating expense once it is up and running versus land-based?

**Ms Ewin:** I would have to revert to you on that one.

**Mr J. NORBERGER:** I assume that it would, and I will explain why. The operator of Browse, being Woodside, has indicated that the capital expense of a James Price Point solution would have been significantly higher than implementing the FLNG solution. We did not get down to exact dollars, but Woodside made out that there is a significant gap; we are obviously talking billions and billions of dollars. Over the life of the project, one of the figures that we have been given is that the rate of return for the FLNG option would be around the 13 per cent mark, and for James Price Point would be around 11 per cent or 11.5 per cent. So at somewhere between 11.5 per cent and 13 per cent, something becomes commercially viable. For a project that has the potential to turn over \$250 billion in revenue, a one per cent difference is obviously a fair bit—\$2.5 billion. That tells me that if you have a huge discrepancy in capital costs upfront—I imagine that it would be more than \$2.5 billion—somewhere along the life of that project, that gap is being whittled down so that you end up with approximately a \$2.5 billion gap. Would you not, however, think that costs in the near term would be much more likely to be accurately diagnosed and managed than would be ongoing increased costs over 25 years? I would suggest that the risk factor is much higher if you have higher operating costs than it would be if you are trying to forecast what the industrial world is going to look like, what the economic world is going to look like and what the political world is going to look like 25 years out front, as opposed to a reasonably more accurate picture of what the construction and economic world would like over the next five, six or seven years, for example?

**Ms Ewin:** As I have said, I would have to revert to confirm that. But my inclination is to agree that the opex is possibly higher over the life. For example, whenever we make an investment decision, we do a standard analysis of a number of different variables that are risks over the life of the project. Normally, with most projects, the capital cost will have probably three to four times the weighting of the opex cost, just because of the discounting and the fact that the rate of return on capital is a discounted measure. Because of probably a combination of that and our long-term

experience in operating fields, our view is that there is generally less risk in operating costs. It is a combination of those two factors—the discounting and our experience in the industry.

**The CHAIR:** I understand that ConocoPhillips and Santos have discoveries near Scott Reef in the Browse Basin.

**Ms Ewin:** Yes, in the Browse, with Greater Poseidon.

**The CHAIR:** In deciding whether to develop this via FLNG, what consideration was given to developing the Browse discoveries through shared infrastructure that would pipe the gas onshore to James Price Point?

**Ms Ewin:** We do have a discovery in the Poseidon area. We are currently continuing to explore what we call the Greater Poseidon area, so there is still an active drilling program going on before we have a good feel for the exact size of the resource in the development and the characteristics of that resource. As a result, we have not made a decision at this point in time. I would say in fact that all development options are still on the table. That would include floating, but it would also include onshore development at both Darwin and James Price Point. We would have to say initial work, particularly now with Woodside not being a first proponent of James Price Point, would mean that the additional costs of a greenfield development at James Price Point is not making it the option that would be floating to the top at the moment.

**The CHAIR:** This is way off into the future, but if the Canning Basin holds substantial deposits, do you think there is a synergy there and that you would probably be looking for somewhere to export that gas from; and does that fit quite well with the development of the Browse gas field as well?

**Ms Ewin:** It could, but it is very early days in the Canning Basin, so very difficult to know what type of field you are developing. Even at the time we make a decision on the Greater Poseidon area, I doubt that we would have sufficient information to be able to take that into consideration in an investment decision; it would just be too early in the process. So the Greater Poseidon would have to stand alone, if you like, in the decision around that field.

**The CHAIR:** What is your time line for that? When do you think you would have a better idea of what is in the Canning Basin?

**Ms Ewin:** It is at the very early stages of exploration. We are in the first phase of what could be a three-phase program of exploration. This phase will take just over two years. At the end of the first phase, we will decide whether we will continue to phase 2 and phase 3. Again, I would need to revert and confirm, but my best guess is that we are still six to eight years away in the exploration phase of Canning.

**Mr P.C. TINLEY:** Did ConocoPhillips ever have any conversations with the other proponents of the Browse for working together on a joint venture or working in cooperation for an onshore facility or even using your own facility in Darwin on a toll basis?

**Ms Ewin:** We had some initial conversations around James Price Point. But ConocoPhillips' message was at that stage that it was too early for us; we were still in the early exploration phase of the Greater Poseidon area, and until we understood the resource that we had available, we could not fully assess or commit to development options. So they were very early discussions and did not go very far. We did keep abreast of the progress through the state development authority. In terms of piping to Darwin, I do not recall any discussions in relation to Woodside, but I may not have been involved in them.

**Mr F.M. LOGAN:** Has ConocoPhillips done any work in relation to other producers about the possibility of using the ConocoPhillips existing Darwin infrastructure; for example, the tolling processes?

**Ms Ewin:** Yes, we have. At the time of the Sunrise project, when the joint venture was making its selection of a preferred development option, ConocoPhillips put together a proposal that competed

with the other development options that were assessed at the time in relation to bringing the Sunrise field into Darwin. In addition to that, we are actively working with our existing joint venture partners to understand any arrangements that would exist for both future explanation of Darwin and backfill of the Bayu-Undan field at the end of its field life.

**Mr P.C. TINLEY:** Your intellectual property—your optimised cascade liquefaction process—is that appropriate for FLNG? Have you gone through the exercise of working out whether that methodology will flow?

**Ms Ewin:** We are currently going through it, and we expect to have the work completed by the end of the year. But it is our expectation that it will be appropriate.

**Mr F.M. LOGAN:** Could you give me some description about Conoco's experience in operating FPSO vessels, because I note from your submission that you are operating one of the largest FPSO vessels in the world in the Belanak field in Indonesia?

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[11.50 am]

**Ms Ewin:** Yes. Why we noted that is that there is often a lot of talk about floating LNG being very new technology. Two-thirds of the technology on a vessel is actually very much proven, which is what we refer to as the upstream processing side. *Belanak* is approximately 1 000 feet long and processes condensate LPG; it does gas recycling. The complexities of our *Belanak* FPSO are probably more complex than most other fields or the upstream portion of any other floating development. We are very comfortable, obviously, with two-thirds of that technology. We take our experience with the Belanak field into account when making assessments of floating LNG. The remaining roughly one-third of the project is the marinisation of the LNG portion. Obviously, we are very comfortable with the LNG technology, so it really is just getting comfortable with the marinisation aspects of it. Obviously, we are going through extensive work—we have reviewed the work that Shell has done as well on its concept in relation to Sunrise—to get ourselves comfortable on the marinisation portion of that project. In reality, when you break the pieces down, although floating LNG in itself seems like a very new concept, a large portion of that is very much proven technology.

**Mr P.C. TINLEY:** The aggregation of it?

**Ms Ewin:** Yes, the aggregation and the marinisation of the liquefaction.

**Mr F.M. LOGAN:** How many people on the *Belanak*, for example, can use other FPSOs that operate?

**Ms Ewin:** I am not familiar with how many are on *Belanak*. I know, for example, at Bayu-Undan, we have a combination of platform and FPSO out there. We are in a steady state operational phase. At any one point in time we have 150. At the moment, we have additional maintenance going on, so we have additional accommodation support vessels out there and we are up to about 350. That is at any one point in time, and obviously with back-to-back rosters et cetera we have a larger employment number.

**Mr F.M. LOGAN:** Were you referring to Sunrise or Belanak?

**Ms Ewin:** That is Bayu-Undan, I am sorry.

**Mr F.M. LOGAN:** So Bayu-Undan is using the *Northern Endeavour* FPSO. Is that your platform?

**Ms Ewin:** No, we use the *Liberdade*.

**Mr F.M. LOGAN:** Does that FPSO come off station or do you leave it on station and the maintenance is done?

**Ms Ewin:** It is actually an FSO, yes.

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**Mr F.M. LOGAN:** If you know, could you advise where, for example, the *Belanak* or the Bayu-Undan FPSOs were designed and built?

**Ms Ewin:** I was around at the time the Bayu-Undan one was built, and I am trying to think if I know specifically where the FSO was.

**Mr F.M. LOGAN:** You can provide that by further information.

**Ms Ewin:** Yes, if I could, to be certain.

**Mr F.M. LOGAN:** It would be good if Conoco could give us a bit of history of the FPSO vessels as it is operating a number of FPSO vessels.

**Ms Ewin:** Okay.

**Mr J. NORBERGER:** One of the emerging common taglines, if you like, amongst the submissions by the proponents of FLNG, almost word for word, is something along the lines of what I read in your submission; that is, Perth is well-positioned to create engineering and procurement centres of research excellence. We hear things such as Perth can be the centre of excellence for FLNG and we can export it. Could you explain what that would look like?

**Ms Ewin:** Perhaps I can give an everyday example that might help. We have recently established an integrated operating support centre in Perth for our Bayu-Undan and Darwin fields. It is still happening, in fact, but the majority of it was established five to six months ago. What that support centre looks like is we have integrated planning, engineering and reservoir engineering all located centrally in West Perth and in communication with the fields online. We are able to get instant data from the fields and the operators in the fields. We have a core team that sit in a room—in fact, a single room—who give that technical guidance to our operators. We can go the next step further and actually take control of operations off site, but we have not done that at this stage. That also gives this core team access to the support services they need, in terms of consultants, engineering, houses et cetera. That is a current-day example. Perth has a very good depth of engineering and other support services. As they become familiar with the floating technology—perhaps some of the first in the world to do so—we believe there is a real opportunity to be a support centre and export some of those skill sets that are built up. We feel we are already doing it for our Bayu-Undan and Darwin fields.

**The CHAIR:** I will just switch to domestic gas. I understand your gas from the Athena field goes through the North West Shelf.

**Ms Ewin:** That is correct.

**The CHAIR:** Do you have a domestic gas commitment as a result of that?

**Ms Ewin:** The Athena field is more a direct contract with the operator. We do not get in any way involved. It is more a financial sale to the operator, so the operator takes care of all the domestic gas arrangements associated, rather than ourselves directly.

**The CHAIR:** The Territory has not done a similar thing as a trade-off, insisting on domestic gas being allocated. Have you ever felt there should be a commitment? I understand that the Territory has had trouble with domestic gas in the last few months. What goes through there currently is all exported—is it not?

**Ms Ewin:** The great majority of it is exported. We actually have a contract with the Northern Territory government through its Power and Water Corporation. That contract was negotiated commercially, whereby we supply backup gas in the event their main supplier is unable to for some reason. We feel like, to date, we have been able to meet the Territory's needs through commercial negotiation, and we continue to talk to the Territory at the moment about its current needs for gas. We work with them where we can. Although much of the Bayu-Undan field is pre-committed to export, we feel, really, that open market conditions will promote an environment where there is

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greatest investment and the greatest likelihood of the domestic gas needs being met and therefore is the appropriate way to go. In addition to that, over on the east coast through our share in the Australia Pacific LNG project, we also supply domestic gas to the local market as well on a commercial basis.

**Mr F.M. LOGAN:** This is not specific to Conoco, but is a question we are putting to a number of companies. Why would Australia be seen as suitable for first use of FLNG technology? Is there a good reason why Australia would be seen as the rollout for FLNG as opposed to other countries?

**Ms Ewin:** There are a number of factors we take into account when making an investment decision. Two key ones are available human resources to support a project. Australia has very strong capabilities in the oil and gas area and therefore I think in terms of floating LNG it has good access to highly skilled people, which is always needed. The second is about, really, just driving the economics of a project. Australia's costs have risen significantly, for example, since the time that the Darwin LNG plant was constructed, to our experience now over on the east coast with Australia Pacific LNG. Therefore, there is an underlying economic driver: Australia needs to stay competitive and floating LNG is potentially an important way to be able to meet and deliver that driver.

<011> T/4

[12.00 noon]

**Mr F.M. LOGAN:** Highlighting ConocoPhillips' involvement in the Australia Pacific LNG project and, as you just put to the committee, the higher costs of onshore LNG driving FLNG decision-making, where are the high costs involved in your experiences in Queensland with Pacific LNG?

**Ms Ewin:** I must confess, I am more familiar with the costings at a higher level rather than the breakdown at the individual level. I do not think there is one individual area. Regulations and getting approvals is a very large and expensive process in itself. Then there is really just the underlying cost of construction; I would say it would be across the board, but I would have to revert to confirm any further detail.

**Mr J. NORBERGER:** Thank you for that, Kayleen. I think you have made a pertinent point. All the proponents of FLNG frequently mention the cost of construction in Australia and obviously in this context, particularly in Western Australia. Reference has been made to the Gorgon project and the cost blowouts there. It would be very interesting to get your viewpoint on something, and that is that obviously a lot of the components of an LNG train are modularised and manufactured overseas. The feedback that we have had from a number of industry sources that are working on these projects from all across the field, and something that I think does not get reported or spoken about too often, is that, essentially, a significantly high rate of rework is required. Components are manufactured overseas, presumably much more cost-effectively, but when they come to Australia, they do not meet our Australian standards, they do not meet our safety standards or our stringent quality standards, which, if they had been manufactured here in the first place they would have met from the outset. They then require fairly extensive rework and, as you can imagine, rework is generally not cheap because it has already been put together. I would suggest that that cost then gets allocated to the Western Australian cost centre. You are incurring the cost in Western Australia, as opposed to allocating that cost of rework back to the country of origin or whatnot. Would you suggest that that is actually skewing the reality of how much things would cost to manufacture in Western Australia in the first place, if it had been done here from day dot?

**Ms Ewin:** My direct experience is mainly with the Darwin project and I do not recall a significant amount of rework associated with that. I must confess that I am not close enough to the Australia Pacific LNG portion of the project to be able to comment on that, but I do not think that the rework is significant. To my knowledge, the LNG part of the Australia Pacific LNG project is going quite well and is on budget and on schedule. It is a matter of having robust, early phase planning to avoid that.

**Mr F.M. LOGAN:** Just taking that issue of costs one step further, Kayleen. I know that you indicated you are not au fait with the Pacific LNG project in its detail but you did relay that you are aware of the higher aspects of the cost structure. If you compared Pacific LNG cost structures to your Darwin experience as well, would you agree that one of the key differences between now and then, which was a determiner of costs, was the Australian dollar?

**Ms Ewin:** It is one factor, but the underlying costs have also increased.

**Mr F.M. LOGAN:** Underlying being labour costs?

**Ms Ewin:** Labour costs, the cost of steel, cost of the engineering portion of it; but you are right, the Australian exchange rate is one factor that has also impacted.

**Mr F.M. LOGAN:** The reason that I ask the questions, Kayleen, is obviously the terms of reference; we are trying to drill down into the issue of the impact of FLNG on Western Australian businesses, particularly the areas of design and engineering and fabrication. I accept that the dollar is one aspect of it and then, of course, there are the other examples of costs that flow on from doing work onshore now. When you look at the engineering and design, which is not done in Australia, and the modular development, a lot of which also is not done in Australia, and the sourcing of steel for that modular work that is being done overseas, which is basically sourced outside Australia, really, when it all boils down, the only cost you are talking about is supply costs of various services and other aspects and construction costs.

**Ms Ewin:** I would add to that the regulatory costs up-front.

**Mr F.M. LOGAN:** And obviously the regulatory issues that you refer to. I am not trying to put you on the spot, Kayleen; I am just trying to draw a comparison because we have to dig down to look at the reasons.

**Ms Ewin:** The comment that I make is that the costs of construction have increased worldwide; it is not just Australia. It is sometimes difficult to drill down to why in Australia, for a combination of reasons, they have increased in a higher proportion. That is why we believe floating LNG, whether it be in Australia or somewhere else, is a competitive advantage that may be needed to unlock not only Australian fields, but also some other international fields, depending on the characteristics of those fields. For us, Australia has the advantage of being an early mover in that technology and therefore it has the ability to pick up a competitive advantage in what is an international market in terms of competition for investment capital, but also an international market in the competition for skills and bringing that expertise out here.

**Mr J. NORBERGER:** You could argue that Australia is a great country to roll out new technology because the taxpayer underwrites, I would suggest, 60 cents in the dollar for R&D costs. Under the PRRT, you only pay tax on profit. In essence, the Australian taxpayer is helping to underwrite any cost overruns in introducing a new technology or anything like that, whereas if you rolled out FLNG in another country with a different tax base—it might be production based, volume based or royalty based—you would not have that advantage. If you are going to roll out something new, why would you not roll it out somewhere where, really, the predominant risk is being carried by the taxpayer?

**Ms Ewin:** I am going to disagree with the comment that it is a predominant risk. Whatever development concept you look at for an LNG field, billions of dollars that will need to go into it. That is a lot of money to put on the table. In terms of tax regimes, the overall economic impact is one factor that is taken into account when deciding on developing fields, but it is just one of many. It is really those overall economics that drive an ultimate decision. At ConocoPhillips, we take all our assessments on a field-by-field basis. There is not an underlying driver to say that Australia has a regime that is supportive of this, so we will go there. It is about understanding the rocks, what they can deliver, and then overlaying the cost of the economics associated with that specific field.

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**Mr P.C. TINLEY:** You said that the regulatory environment has a cost to it. From what I hear, it is sometimes not insignificant. What percentage of the project would you say regulatory costs are?

**Ms Ewin:** I would have to revert to you with that.

**Mr P.C. TINLEY:** Okay. In your experience, do the regulatory requirements for onshore versus offshore differ?

**The CHAIR:** Do you have any comparison between Australia and other countries? Is there anything that our government could do that would, if you like, tip the balance towards a more favourable consideration being given to the onshore process?

<012> S/3 [12:08:40 PM](#)

**Mr P.C. TINLEY:** I am sure there are a number of West African countries!

**The CHAIR:** Well, no, that is a point that is worth making and I think Australia gets a bad rub in this area. If you make a deal with the Australian government, we will pretty much stand by it. We do not go back in a couple years' time and look at it and say, "Well, it seems to us that you're making too much money here, we're going to up your rates" or anything like that. We do not do things like that. We stand by our agreements and we have rule of law. That is just a comment.

**Ms Ewin:** It is one of the many factors that is taken into account in an investment decision.

**The CHAIR:** Could you, perhaps, tell us about when you are sitting down and comparing an investment in an Australian gas field versus a Brazilian one, or a Mexican one, or a Russian one even, or somewhere off the West Coast of Africa, how do you put a dollar value on risk when you are comparing these different projects?

[12.10 pm]

**Ms Ewin:** When we assess a project, we do not purely assess it on economics. We present an analysis of the risk factors that go along with any project; so it is more qualitative than quantitative. But that is the type of information we present, depending on the size of the project all the way up to board level, for a significant project. So the rate of return that a company requires to invest in a risky country that does have a higher sovereign risk, if you like, will be greater than a rate of return in a country where we are comfortable with the sovereign risk. But we do not have set thresholds; it is more presented as a qualitative piece of analysis up to the decision makers.

**The CHAIR:** Following along from that, one of the interesting things about Browse is it will be making a decision—and they say, once again, it is a risk to go with FLNG, even though, actually, there will not be an operating FLNG plant in the world at that time. How does a company like yours look at something like that?

**Ms Ewin:** When we run the economics, for example, we allow for additional contingencies. We often refer to them as first-of-a-kind contingencies; so the economics we run will need to be robust to a greater range of cost uncertainty in the capital phase. Likewise, we will run a greater range of contingencies in terms of operational uptime, start-up dates, et cetera. So as we run our suite of economic analyses, we will take into account those risks in that way. The outcome still needs to be robust compared to an onshore development, for example. It is a business that is not without risk; we are used to assessing risk, but having said that, too, as I said, it is billions of dollars every time you make a major decision on a LNG project. So, in fact, I think we are quite conservative when it comes to assessing risk. We need to be to be a successful company, but we do take into account—we do realise that we need to understand those risks. As I said though, too, is the whole technology is not first of a kind. A lot of it is established technology. It is one portion of the technology which is first of the kind.

**The CHAIR:** And it is the first time you have to consider something that is moving around.

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**Ms Ewin:** Yes. There are, as I said, definitely, first-time challenges in aspects of it, but it is not the whole vessel and not the whole process that is first of a kind. I mean, we assess it on that detailed level to understand it.

**Mr F.M. LOGAN:** Just one final question from me. Again, it comes back to the terms of reference of the committee; it is about the opportunities for work for Western Australians. I do remember the construction of your Darwin LNG facility, it had a substantial flow-on effect, particularly for Western Australian companies because a lot of the fabrication and engineering work came out of Western Australia because of the inability or the scale of those types of companies in Darwin. Should ConocoPhillips move forward on FLNG—or whether it is Poseidon or any other field in Australian waters—will ConocoPhillips look at opportunities available for Western Australian businesses in the early phase as opposed to the operational phase? That is in the design, manufacture and fabrication of whatever components can be done for future FLNGs? I would remind you, for example, in the Bayu-Undan field, the Sunrise area, the top sides for Northern Endeavour were all done here in Western Australia. They were substandard areas by the way; we did not have the Australian Marine Complex at that stage, but we still managed to deliver those.

**Ms Ewin:** As I said, we are not at the stage of assessing any development plans for Greater Poseidon or any field at this point in time at that level of detail; so we do not have a set plan established in any way. So my comments could only be at a normal process level, if you like. But in terms of going through that process, just as we did for AP LNG and other projects, we will always look and make sure we provide information opportunities for Western Australian companies to compete and look at ways where they can —

**Mr F.M. LOGAN:** Be involved

**Ms Ewin:** — be involved.

**The CHAIR:** You have a time line for development of the Greater Poseidon gas field; if you made the decision to go with FLNG there, would you give strong consideration to that field having a supply base in Western Australia?

**Ms Ewin:** I would think so, given the location. But to be truthful again, we are not at the point of—at that level of detailed analysis to those options to have made any decisions or have any real discussions on it. For example, our drilling supply base is out of Broome.

**The CHAIR:** I think we have come to the end of our questions. I will just read the closing statement. I would like to thank you for your evidence before the committee today. The transcript of this hearing will be forwarded to you for correction for minor errors. Any such corrections must be made and the transcript returned within 10 days from 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. If committee members have other questions that occur to us, will it be okay if we send you those questions for reply to us in writing?

**Ms Ewin:** That will be fine.

**The CHAIR:** I think there actually was one or two points you were going to get back to us for clarification.

**Ms Ewin:** Yes.

**The CHAIR:** With those remarks, I would like to thank you for your appearance before us today.

**Ms Ewin:** Thank you.

**Hearing concluded at 12.16 pm**

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