ECONOMICS AND INDUSTRY STANDING COMMITTEE

INQUIRY INTO THE ECONOMIC IMPLICATIONS OF FLOATING LIQUEFIED NATURAL GAS OPERATIONS

TRANSCRIPT OF EVIDENCE
TAKEN AT PERTH
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SESSION THREE

Members

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

Hearing commenced at 1.02 pm

Mr JEAN-FRANCOIS LETELLIER
General Manager, GDF SUEZ Bonaparte Pty Ltd, examined:

Mr PETER JOHN RUMBALL
Project Services Manager, GDF SUEZ Bonaparte Pty Ltd, examined:

Mr TOM BADDELEY
Government and Community Relations Manager, GDF SUEZ Bonaparte Pty Ltd, examined:

The CHAIR: On behalf of the Economics and Industry Standing Committee, I 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 the other members of the committee present today. I am Ian Blayney, chairman and the member for Geraldton; next to me is Hon Fran Logan; and the other committee members are Jan Norberger and Peter Tinley.

The Economic 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 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's specific questions we have for you today, I need to ask you the following: have you completed the "Details of Witness" form?

The Witnesses: Yes.

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

The Witnesses: Yes.

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

The Witnesses: Yes.

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

The Witnesses: No.

The CHAIR: Do you have a statement to begin with?

Mr Letellier: Chairman and committee members, thank you for the opportunity to answer any questions you may have flowing from our written submission to the inquiry and provided to your secretariat. I am joined this afternoon by my colleagues. I do not propose to take you through the submission in this opening statement, but I would like to highlight two key points.

Firstly, GDF SUEZ Bonaparte is the operator of Bonaparte LNG, a floating LNG project in the early stages of its feasibility and based around extracting natural gas from the Petrel and Tern gas fields, 250 kilometres west of Darwin in the Bonaparte Gulf and about 1 000 kilometres north east

of Broome. Both fields were discovered more than 40 years ago and have long been considered too remote and relatively small to develop economically by conventional means. They are typical examples of what is known as stranded gas fields, so for 40 years no-one has been able to find a way to get this gas out of the ground and bring it to market. In 2009, GDF SUEZ entered into a joint venture with the Australian oil and gas company Santos to consider the development of these fields using floating LNG technology. We are now in the pre–front end engineering and design phase of the project, confident but still with a lot of work to do before reaching final investment decision.

Secondly, I would like to mention GDF SUEZ, my employer and the owner of GDF SUEZ Bonaparte. GDF SUEZ is a Paris-based group which has had a presence in Australia for many years through GDF SUEZ Australian Energy, formerly International Power, and partnerships like Degrémont, in water management, and SITA, in environmental services. Importantly, for the purposes of today's hearing, GDF SUEZ has been a major player in the LNG business for many decades. It is the biggest importer of LNG in Europe, operates the third biggest LNG supply portfolio in the world and has a fleet of 17 energy tankers. The group also has a long history of innovation and has been working on innovative offshore technologies for many years. Floating LNG is the latest of these and whilst it is not without its challenges, we have yet to find a technological obstacle to its development. We remain hopeful that Bonaparte LNG will become our group's first floating LNG project in the world and finally bring Petrel and Tern gas to the market. Thank you.

Mr F.M. LOGAN: Jean-Francois, can I just lead off with some background about the possible FLNG decision for yours and Santos's Bonaparte fields? If you were to go ahead with FLNG, which company would be doing the design? Have you got proprietary use of the Shell technology or are you proceeding alone?

Mr Letellier: From the beginning, our strategy was to develop as the owner and to rely on the consortium of an engineering company who were world-class associated with a shipyard. Today there is a design competition ongoing between two consortia—namely, Technip associated with the DSME versus KBR associated with HHI. There will be a winner in this competition and this winner will be awarded the FEED and, subject to FID, the execution.

Mr F.M. LOGAN: Will a winner of that competition actually create FLNG technology specific for GDF SUEZ–Santos; it will not be a derivative of a Shell trust, so their technology?

[1.10 pm]

Mr Letellier: No, it will not be a derivative. The choice is of putting together existing technologies. It talks about qualification of the different pieces of the FLNG. We leave that together with both. We took a certain number of key decisions before we started the design competition. After its construction, each construction has some latitudes in the choice of equipment and technology.

Mr F.M. LOGAN: Is Kellogg Brown and Root doing its design work out of Houston?

Mr Letellier: No, from the United Kingdom.

Mr F.M. LOGAN: Thank you.

Mr J. NORBERGER: Thank you, Jean-Francois. In this submission, which I might say was quite refreshing to see as it was brief and to the point, you talk about the pre-financial investment decision expenditure and mention that you are forecasting to spend about $US475 million, of which 60–70 per cent will be delivered as local content—obviously, that is great to see. Pre-FID includes front end engineering and design, doesn't it? I mean, you need to do the FEED before you get your FID, and you are currently doing pre-FEED now. I guess the missing step in between is the full FEED?

Mr Letellier: There is a pre-FEED and a FEED and we call all of that pre-FID work. When we talk about $US475 million it is overall cost of the pre-FEED plus the FEED.

Mr J. NORBERGER: Yes. Does that fund going out include the competition?

Mr Letellier: Yes.

Mr J. NORBERGER: Is there any Australian content as a part of that happening as we speak? I know we talk about KBR working out of the United Kingdom, and because it is a substantial percentage, which is fantastic to see, can you extrapolate on what the Australian content is likely to look like in the pre-FID?

Mr Letellier: Yes, in the expenses you have, for example, an appraisal well that will be done in Australia by Australians. The appraisal well is operated by Santos. There are many studies that have been done on the sub-surface and the subsea—Wood Group Kenny is working for us right now. There are all the people who have been hired locally for the project—roughly 60 people at the end of the project. What are not local are actually KBR, Technip, Daewoo Shipbuilding and Marine Engineering and Hyundai Heavy Industries. These are not local content but, roughly, the rest is local.

Mr P.C. TINLEY: You said that the discovery of these fields was a long time ago but that it was uneconomic to do anything with them in a conventional way at the time, for 40 years, but they are now viable. Typically, we know that once these fields are exploited, both onshore and offshore for different minerals and in different areas, the resource is often a lot bigger than the original exploration told you. If you find that that is the case with this particular FLNG project, what capacity have you allocated for, or you think FLNG presents, to scale up your production?

Mr Letellier: We envisage the case when we look at the potential distribution of the resources. We have the low case, the mid case and the high case of resources. We always design for the mid case of resources. We envisage the low case and what would happen if we have fewer resources. In the case of having more resources, we extend the life of the FLNG. The normal operation life is 25 years, and we did some studies to see if we could extend the operation life to 30 or 35 years. That is the answer to the question: to extend the life of production with the same capacity.

Mr J. NORBERGER: The actual rate production could not be increased, so the FLNG has a limit, I suppose, placed on it?

Mr Letellier: When you build it for around 2.4 million it remains 2.4 million.

Mr P.C. TINLEY: Is it constant?

Mr Letellier: Yes.

Mr J. NORBERGER: If that is the case, if you end up with the higher scenario, surely you could extend the life of the project. Obviously, from a net-present value point of view you are discounting your cash flow back—you are almost paying a penalty for not being able to ramp up production early on. If there was demand and the price was right, you do not have the option of adding an additional LNG train that you might have been able to do with an onshore facility. Yes, you can extend the life of the project, but a dollar in the hand today is worth more than a dollar in the hand tomorrow. Do you see that as a significant risk?

Mr Letellier: For me, it is not a risk; it is an upside to have more gas than the mid case. Frankly, the risk is to have less. When you look at the probabilities of having more than the highest point, such that you will have 20 years plateauing instead of 15 years plateauing; it is not so much in addition, there is no mirror curve considering the amount of studies we have done on the subsurface, we have quite a good view on the potential range. Of course others can come but talking about the gas fields we have today, they have pretty much been assessed.

Mr F.M. LOGAN: Jean-Francois, you are aware of the terms of the inquiry and what we are specifically looking at in the first two components of the terms of the inquiry—the impact of FLNG on local design, engineering, fabrication and manufacturing operations. I am not too sure if you are aware of this, but in the past LNG trains were both designed and engineered in Western Australia;

they were fabricated and installed here in Western Australia; FPSO vessels have been serviced and maintained in Western Australia and topsides for FPSO vessels have been designed, fabricated and exported from Western Australia to places like Singapore. This shows that Western Australia has the capacity and the technology—as in your submission—for a wide range of engineering opportunities. I appreciate your submission taking the committee through what you see as the local content opportunities. The way the submission is laid out is very helpful for the committee. But does GDF SUEZ see opportunities for Western Australia businesses at the front end in the FLNG ship? Obviously, not the barge itself because you need a facility like Samsung or Daewoo to lay that hull, but specifically for topsides, accommodation, anchors and various other components that all go to the installation of FLNG technology.

Mr Letellier: I will begin with a general answer, and Peter can complete it after. The general answer is that the FLNG is not actually an LNG plant that you put on a barge, it is an integrated new object and you have to integrate it quickly. The choice and contracting strategy to minimise the risks of something not being done well, is to do it at the same place. This means that the hull and topsides must be done by the same main contractor, integrating everything. After saying that, when you enter the detail of what is on an FLNG—I think Peter can say a few words here.

Mr Rumball: Some of the major support engineering activities that we envisage are activities that have been previously done successfully with FPSOs. The main one for us is the integrated control system, or the machine automatic contractor, and that will be identified early in FEED. It is important for us to nominate that contractor and then provide it to both, or whoever, will be the successful design contractor. We have done that successfully in the past.

[1.20 pm]

Other areas would be looking at the HFC modelling, which we have done here previously as well—the engineering for that. Flow assurance is done here and then provided to those contractors. Of course, in-house we do a lot of our production modelling. Whilst the body of the engineering is done by the main contractor, there are certain areas that we do want to keep control of and understand and then provide for a life cycle benefit to those contractors. They have been proven industries that have supported us previously very well.

Mr F.M. LOGAN: The reason why I ask is because, for example, on Prelude, as you are aware, the turret is being manufactured in Dubai. If you go ahead, exactly where would you get your turret manufactured? Other companies are looking at other components that could be sourced from Western Australia. They are not all necessarily integral to the function of the FLNG carrier. That is why I asked if GDF SUEZ would be looking at that.

Mr Rumball: In response to the question about the turret, we are still early in our design—we are still pre-FEED—and the selection of the turret is not part of the consortium; it is a subcontractor in the consortium that Jean-Francois talked about. The final design of that and what our concept of the turret is has not been identified as yet. That will be done early in the FEED phase. You are correct; that is a component that is normally built in another centre and then delivered into the integration yard for integration into the final FPSO or, in this case, FLNG vessel. But at this stage I am not sure who that contractor would be and what technology it would be and therefore where they would nominate to build that.

Mr Letellier: You have different components on the FLNG. Building the topside is something. After bringing in the equipment—you have gas turbines, pumps, valves et cetera—it is going to be a tender. Each contractor we are going to choose consults then very early. We impose them to consult very broadly, including Australia and giving Australian companies the same opportunity as others. But the tender after is in their hands, so they would choose the most appropriate solution. The opportunity would be given and after, they will choose inside their contract.

Mr F.M. LOGAN: I come to the other parts of the local content questions that we are seeking to have some answers on. The information that you are providing, which is both information about the operational phase of the FLNG and also the other components of the FLNG. You have listed a number of engineering and design functions on the fourth page of your document, in particular, subsea engineering, whilst there are a number of other things there that can easily be sourced in Western Australia. I will just come to subsea engineering; there is always a lot of work in subsea engineering for any offshore installation. It comes back to the point of the reasons for these questions and the inquiry. We have heard from many companies that are considering FLNG that they seek to make Western Australia a source of FLNG global competitiveness. Firstly, what does that mean? Secondly, given the fact that Western Australia has in a true sense been trying to break into the global market for subsea engineering—with some success, I might add, particularly as the Asian centre for subsea engineering—for your Bonaparte field, who would be doing the subsea engineering, if you have considered that already, for that project? How much of that subsea engineering would be manufactured here in Western Australia? There are two components. Firstly, the term often used by oil and gas companies to this committee is "the global centre of excellence for Western Australia". What does that mean? Apart from maybe a chair or two at a university, we still cannot work out what else that means. Secondly, given that subsea engineering is listed here in your submission as being a component of local content—it is a very important one and it fits in well with what we are trying to do in Western Australia—how much of that work will be done here?

Mr Letellier: For Australia in general, because we are going to operate this facility in Australia, we will have a centre for control very likely in Perth and a logistic base in Darwin. People are trained. We try to train them in Darwin. The centre of excellence is there. But it is really about the operation; it is not about construction. To be frank on the FLNG, today Australia does not have the capacity to build FLNG in an integrated way. But for operations, there is a lot to do and it has already started. For subsea and drilling, it is a different story. Our contracting strategy in subsea is to go for different packages, so we do not ask a big company to do everything. We divide because we think it is better and it is the normal practice to divide into individual packages and to work with local companies as much as we can. Telling you today what is the share is impossible because it is too early for us and we have not started the FEED. It is something we start at the beginning of FEED. In the first six months of the FEED, we refine this package and after we go for tendering, for additional studies and at FID for quotes on equipment. Western Australia has the same chance and I hope there are nice opportunities there.

Mr P.C. TINLEY: If I can just follow on from that. If all the skilled construction work happens offshore by foreign companies, would that scenario put Western Australian companies at a disadvantage for the operational phase? I am thinking specifically around shuts and things like that. If you are going through a shutdown, would the people who design and build the equipment have a competitive advantage in terms of providing the through-life support?

Mr Letellier: There are two parts to the answer. A big part of the operation costs is manpower and logistics. It is not linked to the equipment or the FLNG. More than half of the operational cost is manpower and logistics, helicopters, ships et cetera. I almost say that there is no way to do it outside Australia. The other part, the maintenance, depends on the equipment. FLNG is not designed to go back to Korea when there is a problem; it is permanently moored in the water. It stays in the same place for 25 years, so we have to go to the FLNG; it is not the FLNG that goes to the shipyard. It is very different from having a dry dock et cetera. The equipment, for example, if the OEM has generally worked with the gas topside, it is very likely that it is going to maintain the gas topside. If it is pipework, it can be an Australian company doing the pipework on board. The details, again, it is too early to say anything.

Mr J. NORBERGER: Peter, you were talking earlier about local content. I suppose your statement mirrored what you have in your submission, which is that it is your policy to provide full, fair and reasonable opportunity to local service providers. Beyond that, beyond giving an Australian

company the opportunity to tender for a package of works as well as any other company around the world, no special consideration will be given. If they do not stack up to be the absolute cheapest or whatever it might be, tough; no consideration is being made for developing or improving skill sets in Australia by giving work.

[1.30 pm]

Mr Rumball: No, I do not accept that. I will just touch on the process and also the comment that John-Francois made. We are ideally suited; we are pre-feed at the moment, and the best time to be identifying these opportunities and mapping that is before you get into feed. If you are at the feed stage, the purpose of the feed is to get cost certainty, so you are actually looking to get budget quotes, and by that time, once you are into feed, those budget quotes are locked in and the ability for an Australian supplier, or any supplier, to get into that sort of buy chain is greatly diminished, if not zero. So whilst our contract strategy is not finalised as yet, one premise that certainly is is that no long leads will be ordered by then. The purpose of the feed phase is to identify those opportunities, so that come FID, we are then ready to launch those long-lead items—they are the packages that John-Francois was talking about. So the contractor is not just sitting there with an open chequebook spending our money making commitments. We have an engineering team and procurement officer embedded in that project and that procurement cycle so that when recommendations come back to us for award, it is not just on a low-cost basis, it is on an MPV full life-cycle basis that we would be looking at it. For example, with some of those original equipment manufacturers, if we can demonstrate that in a life-cycle basis, we have better maintenance support out of Western Australia—we have a history of that in the past—just the pure capex numbers do not form the basis of that commitment. It is important during the feed phase to identify and broadcast those opportunities, so that you are looking to map Australian suppliers, if you can, and then once the invitation is there, yes, it is on a full fare and is reasonable, but it is not just a lowest-number-wins basis.

Mr J. NORBERGER: Would you accept the notion that it also forms part of your social licence to operate to give additional consideration? We are not talking protectionism here; I know many countries do that. Look, GDF SUEZ is a huge company with worldwide operations. You have seen and no doubt operated in countries where it is not negotiable. In some of these African nations, if you are to extract their resources, they will tell you, "This is how many people you are going to employ locally. You will do it this way; you will do it that way." Obviously, Australia does not have that, so I would like to think that we represent a very low sovereign risk. One could argue that it is almost an element of good manners to try to develop our capabilities, without being too uneconomical; I accept that. Do you agree that there is a social responsibility?

Mr Baddeley: I might say few comments around that, Mr Norberger. The project is looking at, and has already established, a community partnership, and we will be looking at establishing other community partnerships. One of the major ones is around aligning ourselves with Charles Darwin University. We have had numerous meetings with the university, including one this morning. The expectation is that that will be an alignment with the university. We are aligned with various Indigenous groups—one in particular, and we are working towards another one in the Northern Territory. They are the sorts of things we are focusing on, in the short term, at least.

The CHAIR: What is the basis on which you will make your opportunities known to our manufacturing community; how do you go about it; and what knowledge do you have of locally available skills?

Mr Rumball: Those are the contractors that John-Francois mentioned that in the competition have some knowledge of local capability through local affiliates. What we have done in the pre-feed phase is cement the process in terms of their responsibilities for Australian industry participation plans. We are not talking about taking our document and just cookie cutting it and changing it. They fully understand the requirements so they are embedded with them. We have also sat with them and

mapped. We have given them databases on previous projects where we have also seen opportunities in certain areas, to supplement their local knowledge. We have also had two workshops with both of them in terms of the process around, once we get into feed, how we want to identify these packages and we want to use our existing Connect NT and ICMWA—it has been in a number of different terms—to make sure those opportunities are broadcast. Again, the important thing is doing this early in the project before those budget prices are locked in. So it is process alignment; it is increasing their understanding of local capability through their local affiliates; and then making sure that they understand that when we do come to make the commitments, we are looking for both first and second-tier opportunities to be met, and evidence of that, provided to us. That is mainly FLNG-centric. With subsea areas, as John-Francois said, we manage that ourselves with our own packages.

Mr P.C. TINLEY: Where do you see your principal land base support going to?

Mr Letellier: There will be two. More than a support, I would say the centre—the control—would be Perth, and the logistic base, probably shared or subcontracted, will be Darwin. The logistic base is not much in terms of people and it is logistic support. The big part of the centre of control is in Perth.

Mr P.C. TINLEY: With logistic support out of Darwin?

Mr Letellier: Yes. It is 250 kilometres away. It is the closest, it is already established and it is working quite well.

Mr P.C. TINLEY: In that decision, which is an obvious decision, did you feel that if there was a facility further south of the coastline, in the Kimberley for example—I am probably asking you an opinion now—would it have been more or less attractive?

Mr Letellier: It is really case by case. We would have to see. It is difficult to answer the question without evidence.

Mr P.C. TINLEY: The point I am driving at, which is probably in the terms of reference, is about not only what proponents are doing to assist in the economic benefit of the endowment that you are getting access to, it is also about what the state is not doing or could be doing better to ensure that we are laying the preconditions for success in the state.

Mr Letellier: We are not in this case because we have the Darwin harbour as an almost direct line, and it is obviously the closest town or city to the FLNG. With this project of logistic base extension et cetera, for us it was very good to have all this support from the Northern Territory. If we have a second project further south, we will have to see whether we have the same support. It is difficult. What Darwin did for us we appreciated a lot.

Mr J. NORBERGER: John-Francois, would you suggest it is a fair summary that FLNG offers a lower up-front capital expenditure requirement, but therefore has a higher operating expenditure budget over its life compared to a land base?

Mr Letellier: The opex is higher offshore than onshore; that is obvious. You have to fly—as I said, the logistic part is a big one. After that, is the question in comparison with the capex?

Mr J. NORBERGER: Correct.

Mr Letellier: I think it is in the same order of magnitude as the opex—along those lines—if it is 25 years, compared to the capex; it is about the same.

Mr J. NORBERGER: For FLNG. I am only basing this on the previous submissions that are related to Browse; I know you are referring to your own field. It would seem very obvious that the argument the proponents are making is that there is a significant amount of capital expenditure up-front, but if you have a look at the figures we have been provided with—I am referring to Browse, not your own field—it would seem that the gap at the beginning is whittled down so by the time you get to the end of the lifespan, FLNG is still ahead; it has a higher internal greater return, but that

is certainly narrowed a bit. If that is the case, as we mentioned before, and if the field size is larger, yes, you can extend the life, but you are extending the life at that same high operating expense. How much of a buffer have you built in? At what point do those lines meet and cross? In hindsight, would a land-based option have been more cost effective?

[1.40 pm]

Mr Letellier: I understand your question. I do not know and I cannot say for Browse LNG. I do not know that project sufficiently. For our project you compare to going onshore—same. But we are in completely different situation and there is no comparison between an onshore solution. If there was a comparison, it would not be evidence for 40 years. There is a big, big gap between an onshore solution and FLNG. If in that way the lines never cross.

The CHAIR: You made a decision somewhere to go down the path of developing your own technology; you build your own ships, rather than just buy off the shelf from Shell. Was that decision made right at the start or did you look at the Shell product and decide you could do better? What was your thinking behind that decision?

Mr Letellier: Yes, there is a strategy path in it. Being an operator, if you want to have further projects of FLNG, you consider that you would have some ownership in the product. Off the shelf it is difficult because there is no-one on the shelf. There is no FLNG on the shelf. There are projects and Shell is not the size of what we want. It is much bigger than what we have. So, when you say FLNG, we have different categories of FLNG. You have the big FLNG addressing bigger gas fields. Ours is, I would say, moderate size FLNG with different characteristics and that is why we develop. We have to do it on our own with our internal capabilities in GDF SUEZ with the support of this world-class engineering companies and shipyards doing our own assessment. That is what we are doing now.

Mr F.M. LOGAN: Just to follow on from what Jan was talking about—the comparison between onshore and offshore. I acknowledge what you have just put to the committee, Jean-Francois. Given where the Bonaparte fields are, did GDF SUEZ or your partner Santos consider hooking into the Inpex pipeline and towing the gas through Darwin?

Mr Letellier: Actually, FLNG is not a religion for us, no? It is how we can best monetise the gas fields. At this place it happens that FLNG is the answer. It happens that FLNG is the answer. So we have looked at other alternatives, of course, to check if it was the best. Going to an existing installation requires investment anyway. So, we took that into account. After you have some unknown about what could be the commercial agreements to succeed. So, it is another obstacle in the development of the project because you never know. But anyway, even with the investments that we have to do just to connect, to treat the gas, to connect et cetera, you almost reach the level of the FLNG cost. After, you have to put on top of that commercial arguments with the unknowns.

Mr F.M. LOGAN: Jean-Francois, can I take you back to Europe and the sharing of pipelines in the North Sea, for example, which you would be very, very aware of, which have been longstanding in some cases, and in other cases it has been required by various state governments in Europe that "You will share the pipelines". As you know, the British government required of many of the operators in the North Sea, that they would share, in order to maximise the gas out of those fields, and there seems to be this absolute reticence in Australia, probably because there is no political pressures to make you do it, for companies to share pipelines, which is obviously an easier way to extract gas. I accept, obviously, there is a cost to develop a field and hook into a pipeline, but you are not honestly telling the committee, Jean-Francois, that, for example, if it costs $30 billion to bring FLNG in a Bonaparte field to production or more—no? I do not know. Less? You can tell us.

Mr Letellier: Not here.

Mr F.M. LOGAN: Let us say $25 billion then. That that would be the equivalent cost of drilling and extracting and hooking into an existing pipeline for towing through an expanded, say, for example, Inpex facility in Darwin. There is no way that can be competitive.

Mr Letellier: I am not talking about sharing the pipeline. Sharing the pipeline is something, but you also have to build the installation at the end for the liquefaction. So you suppose that the existing are quite busy, otherwise they are not optimised, and you have to build another one. Even if you consider marginal cost for that, I need a liquefaction unit. I am sharing agreement on existing pipeline; you do not build another one. A connection to the pipeline and the pre-treatment platform at the beginning—you have all this, and you are already above the cost of the FLNG. That is reality.

Mr F.M. LOGAN: What is the cost of your FLNG then?

Mr Letellier: I will not disclose the cost here, but I can do it.

Mr J. NORBERGER: You guys are onto a winner! Very cost-effective.

Mr Letellier: We have a project which is not of the same magnitude of other Australia projects. We are a big project in Paris; probably a small project in Australia.

The CHAIR: We are able to take evidence in closed session, so there is a possibility the committee might choose to come back to you about that. Since your plant will be in the region of, I think, about 2.4 million tonnes per annum, is your system likely to use liquid nitrogen instead of propane as the refrigerant?

Mr Letellier: It is a mixed refrigerant process—APCI. We have selected the process from APCI. It is not owned by anybody except APCI. Mixed refrigerant—so it is not nitrogen.

Mr J. NORBERGER: Jean-Francois, you mentioned in your submission one of the considerations for FLNG was that it was somewhat unknown. I know that some of the technology is not new; just the way it has been put together. You did not have another operating example, I suppose, currently, to go on. In addition to that, what were some of the other risks that GDF SUEZ had to consider in relation to FLNG? What were the top five risks that GDF SUEZ considered in relation to FLNG? You do not need to monetise them.

Mr Letellier: I would say qualification of equipment. Does the equipment exist—that you have to qualify them with motion. So that is one. Another one is the FLNG offloading with two motions—an LNG tanker and an FLNG moving together.

Mr F.M. LOGAN: Just on that, sorry to interrupt. Will that be side by side or?

Mr Letellier: Side by side for the FLNG. Yes. Overall, the capacity to have the motion offshore and you have the capacity so you have the limited space, so meaning you have to do most of this explanation; we take the time to historically study all this in terms of capacity. Other risks? Actually our biggest risks on the project are not FLNG. We consider that the resource is more a risk than the FLNG on this project. If you do the work properly and you do the right studies, you de-risk a lot of the project at the, I would say, not top five, but the top three of the ones I have given.

[1.50 pm]

Mr J. NORBERGER: I appreciate that; thank you.

Mr F.M. LOGAN: Could I follow-up with Jan's questioning? Prelude is an on-station FLNG, which will not detach from its hook-up. So, should a cyclone come through, what are you planning for the Bonaparte project?

Mr Letellier: The same. As I said, for the maintenance, we stay on the station —

Mr F.M. LOGAN: It is on station all the time?

Mr Letellier: Yes, it is designed to stay on the Petrel field.

Mr P.C. TINLEY: A one in one thousand year event; was that your test case?

Mr Letellier: Ten thousand years.

Mr P.C. TINLEY: Ten thousand, yes. So it is the same?

Mr Letellier: Yes.

Mr F.M. LOGAN: I have just asked about the safety, but this is an area at which the committee might look at a later stage, but which I will just ask about now. Because of the isolation of the Bonaparte field, should an issue arise, should a catastrophe occur—and it does not need to be a cyclone, it could be a fire, for example, on the vessel—it is in one of the most isolated parts of the world, never mind isolated parts of Australia, and the logistics are that it is 250 kilometres away. We have seen from the Montara explosion that there was virtually no capacity in northern Australia to respond to that explosion—virtually no capacity—and there still is no capacity to respond to those types of situations on offshore facilities.

Mr Letellier: Yes.

Mr F.M. LOGAN: How have you possibly approached that risk?

Mr Letellier: The first concern and the first priority is the people involved.

Mr F.M. LOGAN: Sure.

Mr Letellier: So, we have the logistics; it means that we have on-site or always supporting vessels with a capacity to take everyone on board. So, for the people we have taken this into consideration, of course, and after the consequence of any accidents, it is gas and only gas; there is no oil.

Mr F.M. LOGAN: Sure.

Mr Letellier: I am very mindful that the consequences are very limited because there is no pollution of any kind. We have just a big fire, potentially, and we have made studies about what could be the consequences of that, yes.

Mr F.M. LOGAN: And in addressing those, do you believe the support vessels will be enough?

Mr Letellier: To?

Mr F.M. LOGAN: To address an onboard fire, for example.

Mr Letellier: It depends on the size of the fire.

Mr F.M. LOGAN: Yes, sure.

The CHAIR: On your vessel, where do you think your employees would be paying payroll tax?

Mr Letellier: I am sorry?

The CHAIR: Payroll tax, it depends on —

Mr Letellier: Ah, of course. They would be employed by Perth.

The CHAIR: So the Northern Territory would not be getting that?

Mr Letellier: Okay. So, it is something we have not looked at carefully. It is Australia, again!

The CHAIR: We hope! Do you think that it is interesting that for the first three companies now, the first place in the world where they will be using FLNG is Australia? Do you think that our tax system is supporting this development?

Mr Letellier: Frankly, it was absolutely not even a parameter. We came to Australia for different reasons. The first one is this opportunity to have stranded gas fields, and to go for FLNG technology was the perfect application. The proximity to the Asian market is the ideal situation. Yes, because Australia is a stable country, it is a country where we can do business. After tax consideration et cetera, it is something else that we can look after, but it was absolutely not a decision parameter in any case.

Mr P.C. TINLEY: I have just one more question about the technical side of the field. We often hear that the composition of the field is important in terms of the time for both extracting and processing. Is there a composition of a field that you are aware of that would not be suitable for FLNG?

Mr Letellier: No.

Mr P.C. TINLEY: Liquids, ratio, chemistry?

Mr Letellier: Too much CO_2 maybe. If the content of CO_2 is too high, it could be a problem for the pre-treatment; otherwise, no. If we are unfortunate not to have enough O_2 on-site on this project, it is easier to develop. But we have not the revenues of the condensates, or less revenues, but I think it can accommodate, yes, almost any gas fields.

The CHAIR: Okay. I will have to call the hearing to a close there.

I thank you for your evidence before the committee today. A transcript of this hearing will be forwarded to you for the correction of 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. It is possible that our committee may send you some follow-on questions. Will that be okay?

Mr Letellier: Yes.

The CHAIR: Are you happy to respond to them?

Mr Letellier: Yes, of course.

The CHAIR: Thank you very much for your time.

Hearing concluded at 1.56 pm