ECONOMICS AND INDUSTRY STANDING COMMITTEE

INQUIRY INTO DOMESTIC GAS PRICES

TRANSCRIPT OF EVIDENCE
TAKEN AT PERTH
MONDAY, 22 NOVEMBER 2010

SESSION ONE

Members

Dr M.D. Nahan (Chairman)
Mr W.J. Johnston (Deputy Chairman)
Mr M.P. Murray
Mrs L.M. Harvey
Mr J.E. McGrath

Hearing commenced at 12.32 pm

WATSON, MR GARY DOUGLAS
Manager, Infrastructure and Government Relations, Perdaman Chemicals and Fertilisers, examined:

The CHAIRMAN: Welcome and thanks for your attendance today. This committee hearing is a proceeding of Parliament and warrants the same respect that proceedings of the house demand. Even though you are not required to give evidence on oath, any deliberate misleading of the committee may be regarded as a contempt of Parliament.

The CHAIRMAN: Have you completed the "Details of Witness" form?

Mr Watson: I have.

The CHAIRMAN: Do you understand the notes at the bottom?

Mr Watson: I do.

The CHAIRMAN: Did you receive and read the information for witnesses briefing sheet regarding giving evidence before a parliamentary committee?

Mr Watson: I did.

The CHAIRMAN: Do you have any questions about giving evidence before —

Mr Watson: No, it is good.

The CHAIRMAN: Please state for the record the capacity in which you appear before the committee.

Mr Watson: I am here today to represent Perdaman Chemicals and Fertilisers in my capacity as manager of infrastructure and government relations.

The CHAIRMAN: Thank you. The committee would like to thank you for your appearance today. Before we ask questions, do you wish to make an opening statement?

Mr Watson: I would like to thank the committee for the opportunity to present some information. I hope it finds the information both relevant and useful to its inquiry.

The CHAIRMAN: We have heard a bit about it. Can you describe what your project is and what kind of schedule it is operating under?

Mr Watson: I have a handout that I would like to distribute. I brought only six copies with me, I am afraid. I did not realise there were quite so many persons here. I would like to take the opportunity to talk to that presentation if I could. A little bit about our project: the Collie urea project has been under development now for some two years. It is an innovative project that will introduce new clean-coal technology to the Australian scene. It is currently in use anywhere in Australia.

The CHAIRMAN: Is it operating overseas?

Mr Watson: Yes. There are more than 140 coal gasification plants now in service around the world, many of which emerged in recent years in China, in emerging economies where there are significant reserves of coal that need to be monetised effectively and where there is a significant demand for energy and energy products. The technology has been around for some 180 years. It is not new. It was known in the 1800s as essentially coal gas and it was used for eating and cooking—I think I have a slide on that—in local communities. The technology is not new. What is new though is the materials, technologies and process control technologies—all of the emerging

technologies that make the use of this technology much more broad in today's context. This project is designed around the application of this new technology in the local environment here.

Slide 2: My understanding of the committee's interests revolve around four points: technology behind clean coal gasification, Perdaman Industries' decision to use clean coal gasification, the economics of clean coal gasification and the prospectivity of the technology in coal applications in the Perth basin.

Slide 3: The best way to describe coal gasification is that it is an enabling technology for other uses. The product of coal gasification is what is referred to as syngas. It is principally a hydrogen-type product. In most applications, this syngas is further processed to manufacture other products. On this slide I have given you a list of some types of products that can be manufactured using this technology. This slide has been borrowed from GE, which is one of the providers of the gasification technology. A number of companies around the world have developed and do sell coal gasification technology.

In terms of what happens, coal is reacted with oxygen and steam at high temperature and pressure. The process is designed not to combust or burn the coal as would be the case in, say, a boiler where you produce steam, burn the coal and the energy is used to produce steam. In this process the objective is to convert, effectively, the coal to a gas. You use a small amount of energy in the coal to effectively facilitate that conversion process. That is the whole principle behind coal gasification. It requires pure oxygen and steam at high temperatures—we are talking temperatures around 1 500c degrees—and high pressures. The process result is a synthetic gas, which is principally hydrogen, as I said. We talk about the history, covered on slide 4. The only point I can add is that large-scale use of this technology has emerged only in the past 10 to 20 years. The 140 plants that are in service around the world are relatively new. It is new technology.

Slide 5: I describe the gasification process as it applies to the Collie urea project. I will not go into too much detail technically; I do not think that is the interest of the committee, but if you want me to describe in more detail please feel free to ask me. On the left hand side of the slide I show that our urea plant will consume in the order of 2.7 million tonnes per annum of Collie coal. The coal will be gasified in a relatively large gasification structure. There will be two gasifiers. In addition there will be constructed an air separation plant, which will be used to generate the oxygen and nitrogen we require in the urea process. The oxygen and the coal are added together in the gasifier and there is further shift process using steam, which, basically, generates more hydrogen and we get the syngas of the process. The syngas is then cleaned and impurities removed and a portion of that syngas is directed to the power generation plant, which is a gas turbine power generation plant to generate all the electricity that is required for this plant. This plant consumes the equivalent of an entire power station's electricity, like Bluewaters 1 and 2 power stations. This urea plant is a big energy user.

[12.40 pm]

The CHAIRMAN: What would be the size of the power generation?

Mr Watson: The power plant will be 230 megawatts capacity. Two gas turbines plus a steam turbine.

The CHAIRMAN: The project uses the totality of it?

Mr Watson: Yes, it will do. It is essentially standalone power generation. It gives an indication of course that we considered the option of importing power to supply the plant because we have the alternative of using the syngas to make urea. There is a cost to us associated with generating power, but when we looked at the economics, the economics of self-generated power far outweighed the economics of imported power.

The CHAIRMAN: Is it just a gas turbine?

Mr Watson: There are two gas turbines. It is what is referred to as combined cycle power generation. We use heat recovery and steam turbine power generation as well. It is a very efficient power plant. Once we have generated the syngas, essentially that syngas is directed to the power generation, as I said, and then the ammonia synthesis plant where the nitrogen from the air separation plant is added to the syngas to produce ammonia. Then we go a further step with another technology to convert the ammonia using the carbon dioxide that comes off the gasification process to produce urea. Then we will be exporting urea by rail from Collie to Bunbury port. From there, it will be taken by Incitec Pivot with whom we have just recently signed a contract.

The CHAIRMAN: That is for domestic use?

Mr Watson: It will find its way back into the domestic market. Incitec Pivot is in fact the largest fertiliser player in Australia and New Zealand. It becomes an import substitution project. The majority of Australia's urea requirements are currently imported. This product will substitute for imported urea.

The CHAIRMAN: Just a point: there is a little "PCF—Commercial in Confidence" at the bottom. Is that all right? This is a public hearing.

Mr Watson: I should have removed that. This is generally published information. I am sure there is not anything that is commercially in confidence here.

Mr Watson: On the next slide, slide 6, is a picture of a typical coal gasifier, just to give you some idea of what one of these looks like. As you can see, it is quite a large structure. It has to be quite tall because you need to be able to pump the coal into the top of the plant and oxygen into the bottom. The conversion process takes place in the middle as they flow against one another—the coal falls down and the oxygen comes up. You need the height to be able to effectively facilitate the conversion process. That is a relatively recent plant constructed in Dong Ting, China.

Mr W.J. JOHNSTON: What is the size of that, because I cannot get the scale? What height is that?

The CHAIRMAN: Buildings 1, 2, 3, 4—that little building on the left-hand side —

Mr Watson: It looks to be comparable to those.

The CHAIRMAN: It would be a good 15 to 20-storey building.

Mr Watson: That is correct. Our gasifiers at Collie will be 110 metres high, to give you some idea. They are fairly large structures.

The CHAIRMAN: How many?

Mr Watson: Two

Mr W.J. JOHNSTON: Is that one or two that is in the picture?

Mr Watson: I am not sure, actually. I do not want to mislead you in any way. I do not know what is behind that structure. It looks to me to be a single gasifier structure.

Slide 7 is just an example of the global application of the gasified technology. We will be using Shell's gasified technology on our Collie plant. As indicated there, Shell has some 27 licences currently issued for its technology in various destinations around the world. In relation to Australia, there is mention there on that slide of our licence for Collie. There has also been a small licence issued for Zerogen, which is a carbon capture and storage demonstration project in Queensland, which is designed to use coal gasification in the process and also to capture and sequester the carbon dioxide that the plant generates. That is a small-scale demonstration facility. In fact the only reason I mentioned it is that ours is the only commercial-scale facility currently planned for Australia.

Slide 8 talks about the Perdaman decision to use clean coal. This was a decision that was the result of a good two years of investigation and research—prefeasibility-type work. We explored options for natural gas and coal in various destinations around the world. We ultimately decided that, firstly, we are a Perth-based company and we are obviously keen to get a project going here in Western Australia in preference to overseas destinations. Secondly, it was pretty evident to us that there was insufficient natural gas available as a feedstock for us quite independently of the pricing of that natural gas at the time. Really, the options for us were limited by local factors, too—simply coal. There were other drivers for us. This is a strong driver on the part of our chairman, who has successfully developed projects here before, to put something back into the Western Australian community. He was keen to try to ensure we brought this technology to Australia and that we could maybe change perceptions and the potential for coal use in downstream processing applications in this country in an environment where coal is becoming increasingly viewed in a negative light globally because of its perceived and real greenhouse gas impacts.

Mrs L.M. HARVEY: When you say there is insufficient natural gas available, is that insufficient gas of composition you need, an inability to secure contracts for gas, or an inability to secure supply, or a combination?

Mr Watson: I think just simply not sufficient—no quantity of gas available. In fertiliser manufacture around the world, natural gas is more predominantly used. It is the more common feedstock for the manufacture of urea around the world, particularly in the Middle East. At the time that we were making a decision on this project, there was not sufficient gas available to us via the pipeline, so we in effect had to look at coal. We explored the use of coal in Eneabba but there was insufficient support infrastructure and the coal itself was not as suitable for gasification. I guess it was a decision that was made in two stages. It looked like coal was the most obvious choice, the feedstock for us initially, when we compared that against the options with respect to availability of natural gas at that time, bearing in mind this was a couple of years ago. Having settled on coal, then it became a question of what technologies do we apply to bring this coal to a certain form in which it can be used to make urea. Then it was a case of looking at the various gasification technologies that existed around the world and we ultimately settled on Shell's technology as being the most appropriate.

The CHAIRMAN: Why did you choose Collie? That is a lower quality coal relative to Queensland.

Mr Watson: Collie coal is quite well suited to gasification processes. There was some work done. I think there are two slides down there. There is a bit of information on the research that was done. There were some gasification trials done with Collie coal plus three other types of coal from other destinations around Australia, including Queensland. The Collie coal compared very favourably against those other coal types. The properties of coal that lend itself to gasification processes is different to, say, coking applications or other potential uses including power generation.

[12.50 pm]

Mr M.P. MURRAY: I might add that that was an initiative of the Coal Futures Group, chaired by Mick Murray. That is where it came from. We had that on the shelf when the project was being talked about. It gave them a couple of years start.

Mr Watson: That was extremely helpful to us.

Mr W.J. JOHNSTON: Did you conduct any sort of tender for gas supply? You said that when you were starting to look at the project a couple of years ago, there were problems with availability, not just price but supply.

Mr Watson: I was not with the company at the time so I am not sure what discussions took place. I am not aware of any tender process having been conducted but I am sure there would have been some discussion with prospective suppliers.

The CHAIRMAN: The company made this decision two years ago. I can understand why you could not continue using coal to make urea, but they have the power plant. That is the real trade-off. You could use the gas to make urea. You have a different composition of gas than the gas coming down from the pipeline. I imagine hydrogen is better for urea rather than natural gas. You would have to strip the natural gas from a lot of things.

Mr Watson: I will talk about that in a minute. Again, I was not with the company at the time but there were discussions with the power suppliers effectively about what they could do for us in terms of electricity supply and at what cost, bearing in mind there is quite a significant amount of power generation in the area of this project. The sorts of indicative costs we received were far in excess of what we felt we could do ourselves. We had made that decision. It is a critical input to this type of technology because it is a fairly significant energy user process so it was important for us to get our energy costs as low as possible to make the project economics work. On that basis, we made a decision to go with self-generated power.

We have a strong commitment to the potential for this technology. We believe that it can level the playing field against natural gas for downstream processing. I have not said anything much in the slides but our view on natural gas is that it seems to be coming more and more diverted to LNG production for power generation and power utility purposes. There is less and less downstream opportunity for use of natural gas because the cost of natural gas relative to other alternatives such as coal is not comparable for downstream type applications. That is another reason why we went with coal. We felt, looking forward, that the key thing for a manufacturing type operation like this is to remain cost competitive against other manufacturers around the world. If you get a downturn in, say, urea prices, those who are the most cost competitive are those who are going to survive. For us it was essential that we be competitive against other urea manufacturers around the world. It is a globally traded commodity. Time will prove whether we are right, but we projected that going forward coal-based urea plants will be more competitive than natural gas-based plants. That seems to be the trend in natural gas.

The CHAIRMAN: That is because urea is generated largely by LNG, flared and more stranded. LNG has a higher value because it is linked to China and other places.

Mr Watson: Yes. We talk about some other factors in slide 9 that leant us to the decision on Collie. You asked early: why Collie? Collie has ready access to existing infrastructure—rail, roads, ports and water. These are key inputs. It is incredibly difficult for a manufacturing project to be able to sustain the costs of providing all that support infrastructure in addition to the greenfields investment in the actual plant itself. This was a key factor in the decision to establish the project in Collie. Another key factor was the ready access to the coal feedstock. We are effectively located within two kilometres of the coal supply. We do not have the costs associated with having to transport the coal to the plant over significant distances, which was another significant factor. Plus, with the support of the local member and the government, there was access to land as well, which is another key factor.

The CHAIRMAN: Where will you locate?

Mr Watson: We are located in Shotts Industrial Park, which is a new industrial estate being created seven kilometres east of Collie. LandCorp is currently assembling that industrial estate and the town planning approval processes are being completed to enable the title to be created—it has already been gazetted—and then we will lease the land from LandCorp for the facility.

The CHAIRMAN: Who are you buying the coal from?

Mr Watson: We have negotiated a contract with Griffin. The project has been delayed by the administration process that is currently underway with Griffin. We are effectively progressing our project in parallel with the Griffin administration process and anticipate that the successful buyer of that business will supply our coal under the contract in due course.

The CHAIRMAN: Is that contract signed?

Mr Watson: Not yet, but it is finalised. We have reached agreement with the administrator on the terms and conditions in that contract. We are just discussing with the administrator whether to sign the contract or wait until the new buyer of the business is known, so we are just working through the final details.

Mr W.J. JOHNSTON: Could I ask you a question that you might choose not to answer? It relates to the price of the coal. This is an inquiry into gas pricing. As I understand it, there is a well-established spot market for coal so the pricing is clearer. What is the mechanism to price your coal, if you are prepared to tell us?

Mr Watson: If I gave you the price, I think I would find myself on the receiving end of a lawsuit. I think there is general published information on typical coal prices available on the public record. Our pricing would be in the range of that information that is generally published. Our pricing arrangement with Griffin is on a long-term contract basis. It is not based on spot market prices. It is a long-term agreed contract price arrangement with an agreed annual escalation type cost-based provision. That is the intent of the arrangement. I can tell you that much but I cannot tell you the number.

The CHAIRMAN: It is volume based; you agree to take so much coal.

Mr Watson: Effectively, we take or pay for the coal.

The CHAIRMAN: Does the escalator have anything to do with petroleum?

Mr Watson: No. What can I tell you?

The CHAIRMAN: CPI?

Mr Watson: It is broadly cost based.

The CHAIRMAN: There is no linkage with gas or oil?

Mr Watson: No. I think that is everything on slide 9.

I turn to slide 10 and just repeat what I said earlier. An assessment has been done on Collie coal. As Mr Murray correctly pointed out previously, and also the cooperative research centre for coal in sustainable development, Collie coal does lend itself quite readily to gasification-type processes. It is quite reactive—that is the most important thing—in technical terms. In other words, it will react quite readily with oxygen. That makes it very suitable for gasification. Interestingly, you can gasify many different materials; in fact, the gasification processes are used to gasify waste products as well for anything.

The CHAIRMAN: Is that the same technology?

Mr Watson: Essentially, yes. In pyrolysis-type processes, they operate at similar temperatures and it is the same sort of principle. It is not unusual at all to generate gas from waste plastics and other waste materials. Biomass and all manner of different materials can be used in gasification processes. You have to manage the wastes more tightly and the process itself has to be more tightly managed but they are suitable feedstocks for this type of process. It does not have to end at coal. Once you introduce the technology, you can broaden its application for other uses as well.

[1.00 pm]

Slide 11 talks about what I thought might be of more specific interest to the committee, which is synthetic natural gas. To answer your earlier question, the syngas product that comes off the gasification plant is predominantly hydrogen and is not readily suitable for household use. It needs to be further processed, just as it would for urea. It is a different process. The methanation process is used to produce what is referred to as "synthetic natural gas" for pipeline transport for domestic users. The technologies for that process already exist. They involve the reaction of syngas with a

nickel catalyst. As I said, that process is referred to as methanation. A good reference site to look at gasification generally and SNG in particular is the Dakota Gasification Company in the USA, which manufactures a range of products from coal, including SNG. They reticulate that gas to residential households.

The CHAIRMAN: To a grid?

Mr Watson: I am not sure of the specifics of the grid, but it is supplied to a grid. I do not know whether they mix it with natural gas or otherwise, but they do grid reticulate it.

I focused my discussion on economics around synthetic natural gas rather than syngas, on the assumption that that is more relevant to an inquiry about natural gas. The interesting thing looking at it in concept terms is the Dampier to Bunbury pipeline terminates relatively close to our site at Collie. I noted on the slide that it is 20 kilometres, plus or minus a few kilometres, from the Collie site. The economics of synthetic natural gas production depends on the scale of the investment. It is like any process investment—the larger the scale the more the economies of scale, the better the unit costs. On a comparable basis to that used by us for the manufacture of urea, we would anticipate that SNG would cost in the order of $5 to $7 per gigajoule compared with the $8 or $10 per gigajoule that is widely quoted for natural gas. On that basis, we believe there is merit in doing further feasibility. Any investment would require a detailed feasibility assessment. We have not done any of that feasibility assessment work. We have given some indications, based on our own experience with coal gasification, of what we think SNG could be manufactured for. It is not a cheap process, but it always comes down to the costs of the competing alternatives. Included in that cost of $A5 to $A7 effectively would be the production of the gas at a sufficient pressure to enable it to be transported without further pumping investment.

The final subject is prospectivity for clean coal gasification. We see the Collie project as being about much more than just fertilizers. It introduces new technology. A value-added downstream processing industry could be created on the back of this technology to diversify the state's energy dependency away from the use of natural gas and gas-based electricity. Coal gasification can be a game changer and create competition by substitution if LNG becomes the only game in town for natural gas.

The CHAIRMAN: Thank you very much. I guess the real elephant in the room here is greenhouse gases. How does that affect your project and its planning and how will you deal with the issue?

Mr Watson: It is fair to say that there is still some uncertainty created around the project because of the absence of an emissions legislative framework for managing carbon emissions. In our case, we have invested some money in the Lesueur geosequestration project, which has significant potential to be effective. We are still two or three years away from having done sufficient investigative work to prove that the technology will work, but we are optimistic that that will be successful. However, that process has to go through its development.

The CHAIRMAN: Where is that located?

Mr Watson: Effectively, it is near Lake Preston. The coastal limestone formations lend themselves to CO_2 geosequestration.

The CHAIRMAN: Is that the one that Rio and some other firm are —

Mr Watson: No, the state government is sponsoring it, along with other industry players in the Collie Basin, such as Worsley, the power station, ourselves and others. It is a broadly supported initiative that is being managed by Department of Mines and Petroleum. As I said, we are encouraged by the early work that has been done there and we are very supportive of it and of continuing to prove the feasibility of that option. The other option that is of particular interest is the downstream use of the carbon dioxide off the plant for either industrial application or algae biofuels production. Our CO_2 is 99.5 per cent pure. We capture it, clean it up and make it ready for further use. It is just a question of generating an industrial application for it. That is as far as we are going.

We are pre-investing several hundreds of millions of dollars in our plant to ready the CO_2 for further use.

Mr W.J. JOHNSTON: Just to clarify that, CO_2 comes off at the point at which you make the syngas, not at the point at which you do your production process. Is that the case?

Mr Watson: If you look at the diagram, I can show you where it effectively is generated. It is on slide 5. The shift process does not say much but that is where it happens. The gasification produces hydrogen and carbon monoxide. The hydrogen and carbon monoxide reacts with steam, which is effectively water, and the energy from the steam plus the water in the steam produces additional oxygen and converts the carbon monoxide into carbon dioxide. That is where the process happens. That shift stage is an integral part of the gasification process.

The CHAIRMAN: What would happen if legislation came in and put a $20 per tonne tax on your CO_2?

Mr Watson: I personally do not know because I have not seen our project financial model. That is kept under lock and key, so I cannot answer that question but I can take it on notice and we may be able to give you some information about that.

The CHAIRMAN: How sensitive is it to that? I do not even know whether $20 is in the ballpark figure for a cap and trade price.

Mr Watson: I could not tell you whether it would make a project economic or not, but we could give you some indication.

The CHAIRMAN: That is the big issue. No-one is building coal-fired power stations around Australia. They are shifting to gas, and that is being done mainly on the eastern seaboard where they do not use much gas. The big issue, as we have been informed, is that the coal prices in Collie are quite reasonable in BTU or whatever way you want to measure it; it is just the risk associated with carbon.

Mr Watson: Correct. I suppose my personal opinion—it is not that of Perdaman's—is that there is a constraint of investment in this country because of that uncertainty.

The CHAIRMAN: Right now you are waiting for that to be clarified, to some extent. You are capturing CO_2, except for the stuff that goes through the power station, which will be flared like any other power station.

Mr Watson: We are just moving into the financing stage of our project. We have finished the preliminary engineering phase and now after several months of financing effort, we are about to find out how significant an issue that is in terms of financing uncertainty. We are approaching this in the only way we can in the current environment, which is to proceed on the basis that a trading scheme for the price of carbon does not exist and if it should exist in the future, we will have to revisit our project economics.

Mr W.J. JOHNSTON: Can I just clarify that hydrogen is running the power station? Do you not have any additional CO_2 emissions from the power station?

[1.10 pm]

Mr Watson: Well, only to the extent that you get CO_2emissions from a gas-fired power station, effectively; you do get some trace emissions.

Mr W.J. JOHNSTON: Yes, but it is not like burning coal or burning gas, where the principal by-product is the carbon dioxide?

Mr Watson: No.

Mr W.J. JOHNSTON: It is just trace—whatever manages to get through the process.

The CHAIRMAN: But the gas going into the power station would include CO_2?

Mr Watson: I do not know the answer to that. I would need to check that. It is a very good question. I can clarify that for you. What I can say, I suppose, in terms of this process, is that 34 per cent of the CO_2 that is produced is actually used in the urea production process. So you do product sequester, say, 30 per cent in round terms of your CO_2 production.

The CHAIRMAN: That is a significant reduction by itself.

Mr Watson: Yes.

The CHAIRMAN: What is the difference in CO_2 emissions between Collie coal and your output? If you sequester 35 per cent of your CO_2, you are coming towards the carbon dioxide intensity of gas?

Mr Watson: I not know the comparison, but, again, we do have information in-house on that.

The CHAIRMAN: So you are not that far off.

Mr Watson: No, we are not. It is referred to as clean coal technology. The other thing to remember, I suppose, is that you have CO_2, but you also have to consider all of the other emissions that are typically generated in, say, pulverised coal steam-fired power stations, the atmospheric pollutants, which are regulated pollutants, unlike CO_2, and you capture all of those.

The CHAIRMAN: You capture all of those?

Mr Watson: Yes, within one to three per cent. So in terms of our contribution to the Collie air shed, for example, we are very small. That is another aspect of this gasification process. They are a closed-type process. They do not have a big stack where all this stuff that comes off the boiler goes up the stack. We do not have that.

The CHAIRMAN: This $5 to $7 per gigajoule comparative price—let us explore that a bit. That is what you would pipe to your power station right, right?

Mr Watson: No. That is synthetic natural gas. We have made an allowance for the downstream methanation-type processes that you would need to employ. We have not designed one or costed one. We do not know. So it is, I emphasise, just a ballpark, and it would need to be confirmed by further feasibility. But that does incorporate an allowance for the further processing that would be required to make syngas suitable for pipeline transport. So in other words, our cost is less than that. I could not give you the numbers. It is far too sensitive for us to publish that. But as I said, probably the best indication is to look at the fact that we have made a decision to generate our own power using syngas.

The CHAIRMAN: But the point is that someone could stop at the same point and become a power station.

Mr Watson: Absolutely, yes. For coal gasification, probably the most broadly used application is in power generation, in IGCC, which is integrated gasification combined-cycle power generation.

Mr W.J. JOHNSTON: You have got three European power stations. Is that the story?

Mr Watson: That is right.

The CHAIRMAN: That is Holland, or the Netherlands, which is pretty fussy about air emissions?

Mr Watson: Yes.

The CHAIRMAN: And one of them is huge—1 200 megawatts. That is a coal – natural gas mix. Holland used to have a lot of gas, until it got eaten up in the Dutch disease. That is a substantial amount of our gasification capacity.

Mr Watson: Yes.

The CHAIRMAN: This relates only to the Shell technology, too.

Mr Watson: That is correct, yes.

The CHAIRMAN: As in GE and others?

Mr Watson: That is right. As you see, Shell has 37 licences, and I have indicated there are over 140 clients, so there are a number of other licensees of this technology also.

Mr W.J. JOHNSTON: You referred us to Dakota Gas. Who owns that?

Mr Watson: I do not have any specific details. We just did a bit of research and asked where there is a down-streaming SNG-type application that might be of interest to the committee, and that one popped up. I have not looked at the detail. I just did a bit of web-based research. It is readily available to anyone to have a look. But they do seem to produce quite a wide range of products. I think it is a very good reference site, actually, in looking at this sort of application.

The CHAIRMAN: I take it from the name that it is located in Dakota somewhere?

Mr Watson: Yes.

The CHAIRMAN: So what is your timing now? You have a few uncertainties. You have the Griffin Coal receivership.

Mr Watson: Yes. Well, we anticipate the Griffin Coal sale process will end probably at the credit committee approval in February. We are proceeding with our financing in parallel with that process. We have agreed with our prospective financiers that they are happy to consider the financing. We cannot obviously draw down funds or anything until that process is complete. Our coal supplier needs to be credit worthy, because of the credit risk aspects of the project, where if we lost our coal supply, our financiers would lose their investment. So it is important that the coal supplier be credit worthy. We are proceeding with our financing, in parallel with that process, and we anticipate that we should finalise that financing activity in the second quarter of next year. We are getting closer now. We are very close to a conclusion with this, and then we can proceed with construction.

The CHAIRMAN: To go ahead, would you need some kind of underwriting from the state government or the federal government, or somebody else, so that you could handle your CO_2?

Mr Watson: It would be good. To eliminate the uncertainty around the project, it would be tremendously helpful if we had a letter or something to the effect that if a trading scheme was introduced, it would not be retrospectively applied, or some other assurances. That would make a significant difference to us.

The CHAIRMAN: Did that happen in the case of Agora?

Mr M.P. MURRAY: I am not really sure. I do not think so.

The CHAIRMAN: There was some underwriting of the risks associated with the leakage of CO_2.

Mrs L.M. HARVEY: I vaguely remember that.

The CHAIRMAN: I do not know the detail. But there was a risk.

Mr Watson: Yes, I recall that. It was public domain information. I remember seeing it in the papers at the time. Yes, it is an uncertainty that confronts us. It is probably the major uncertainty, I would say.

The CHAIRMAN: Are you getting any other assistance from government apart from the land that you mentioned?

Mr Watson: No. The government is considering providing funding to some of its agencies for a bit of improvement and augmentation of the existing infrastructure, the port and the like, to support the project, but beyond that, no.

Mr W.J. JOHNSTON: Where does your offtake go?

Mr Watson: It will be distributed generally in the Asia Pacific region. Two million tonnes per annum of urea is a lot of our urea to place. The Australian market, according to Incitec Pivot, is in

the order of 800 000 to 900 000 tonnes per annum. They already produce 300 000 tonnes at a small plant in Queensland, so they will supply a portion of the Australian demand from that. The balance will come from us. Then what is not placed in Australia will go to New Zealand, India and Indonesia, and even the gulf coast of the US. So we distribute it fairly widely around the Pacific rim I suppose is the best way of describing it.

Mr W.J. JOHNSTON: And physically, how does it go out? Does it go out through Bunbury port?

Mr Watson: It will go out through Bunbury port by ship, and there will be some local distribution, port to port. So some of what leaves Bunbury will land at Geraldton, and potentially land at Esperance. There are already some imports—small shipments, cargoes—going into Esperance. Some of the urea will be placed by road transport into the local market. The Western Australian market for urea is in the order of 200 000 to 300 000 tonnes per annum, so we will endeavour to supply that locally through Incitec Pivot, and the rest will be shipped off.

[1.20 pm]

The CHAIRMAN: India uses huge volumes of this stuff, does it not?

Mr Watson: They do. Their projected demand will go from about nine million tonnes per annum to about 13 million tonnes per annum just over the life of the construction of our project, so there is very strong demand going forward from India. We are personally very pleased to involve a local fertiliser plant, Incitec Pivot, because the benefits flow to the country then.

Mr W.J. JOHNSTON: Is there a spot market for urea? Is it priced on somewhere like that?

Mr Watson: Yes, there is a bit of a mix. I do not know the split, but there is a bit of a mix of long-term contracted supply and spot supply.

Mr W.J. JOHNSTON: There is a bit of a baseline so you can see whether you are paying the right price.

Mr Watson: Absolutely; yes. In broad terms urea is basically benchmark-priced and our contract is based on benchmarks for urea supply out of the main destinations around the world, typically around the Middle East. So, yes, it is a bulk-commodity product that gets priced at world parity pricing or whatever; you do not have much influence at all over the price in the negotiations. That is why you focus on the cost and being cost-competitive. That is the thing that will ensure the best chances of survival going forward.

The CHAIRMAN: It is very interesting that with the Collie coal we can burn it directly in the power stations, or you can gasify it—turn it off, like at the stage that you did with power—mostly hydrogen but some other CO_2 and a few others I imagine. If you are less than five to seven, you are pretty competitive with the direct use of coal and less CO_2.

Mr Watson: Yes, we did. We sought some indications on what we might be able to get from coal-based power —

The CHAIRMAN: So you might be able to —

Mr Watson: — but still decided to go the way we are.

The CHAIRMAN: But to urea—just adding value to it. This is why you call it a clean coal technology; you might use coal, but more cleanly—this is a route to take.

Mr Watson: Yes.

The CHAIRMAN: And the capital cost is lower too, of course, because you are just buying off-the-shelf combined-cycle turbines, right?

Mr Watson: Pretty much, yes; that is right. I guess the reference to clean coal is generally focused around the atmospheric pollutants—that is why I mentioned it—not so much CO_2, and it is

important to understand the differences between the levels of atmospheric pollutants from a coal-fired power station and those from, say, an IGCC where a syngas-fired power station —

The CHAIRMAN: Is this one reason that China is investing a lot in these?

Mr Watson: I think so; yes.

The CHAIRMAN: Thank you very much and good luck with the project. It is very interesting. Thank you for your evidence today. A transcript of this hearing will be forwarded to you for minor corrections. Please make these corrections and return the transcript within 10 working days of the covering letter. If the transcript is not returned, we just assume that it is okay. New material cannot be added via these corrections. Since your evidence cannot be altered, should you wish to provide additional information, make a supplementary submission. Thanks.

Mr Watson: Thank you.

Hearing concluded at 1.22 pm