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**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON INDUSTRY, SCIENCE
AND RESOURCES

Reference: Increasing value-adding to Australian raw materials

MONDAY, 25 OCTOBER 1999

PERTH

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON INDUSTRY, SCIENCE AND RESOURCES

Monday, 25 October 1999

Members: Mr Lloyd (*Chair*), Mr Brough, Mr Hatton, Mr Lawler, Mr Allan Morris, Mr Nairn, Mr Prosser, Ms Roxon, Dr Washer and Mr Zahra

Members in attendance: Mr Lloyd, Mr Allan Morris and Dr Washer

Terms of reference for the inquiry:

To inquire into and report on the prospects of increasing value-adding to Australian raw materials. The Committee will start with an evaluation of the current state of value adding in Australia, and how that compares internationally. This will provide a base from which to evaluate the following topics:

- incentives and impediments to investment;
- intellectual property rights;
- national/international marketing factors which may encourage or hinder Australian value-adding;
- government intervention, both nationally and internationally;
- the location of value-adding industries and projects in regional Australia;
- resource licensing/permit arrangements;
- the impact of vertical integration within particular industries; and
- the Australian skills base and any associated impediments.

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Committee met at 9.05 a.m.

BAGSHAW, Dr Anthony Nicholas, Member, Exploration and Technical Committee, Association of Mining and Exploration Companies Inc.

SAVELL, Mr George Arthur, Chief Executive Officer, Association of Mining and Exploration Companies Inc.

STEVENS, Ms Tamara Carolyn, Assistant Director, Association of Mining and Exploration Companies Inc.

CHAIR—I declare open this fifth public hearing of the inquiry into increasing value adding to Australian raw materials and welcome the witnesses and others in attendance. I have to remind you that the proceedings here today are legal proceedings of the parliament and warrant the same respect as do proceedings in the House. The deliberate misleading of the committee may be regarded as a contempt of parliament. The committee prefers that all evidence be given in public, but should you at any stage wish to give evidence in private you may ask to do so and the committee will give consideration to your request. Would you like to make an opening statement before we proceed?

Mr Savell—Mrs Stevens will read our opening statement, Mr Chairman.

CHAIR—Thank you.

Ms Stevens—Thank you. Firstly, AMEC appreciates this opportunity to provide input to the House of Representatives inquiry into increasing value adding to Australian raw materials. By way of background, AMEC was formed in 1981 to represent mining companies in Australia. We currently represent over 80 mining and exploration companies and approximately 150 mining service and supply providers. In July 1999 AMEC made a comprehensive submission to the committee, a copy of which I will table here. AMEC's submission to the committee makes it clear that the key to increased value adding in the resources sector lies in continued robust mineral exploration.

CHAIR—Is that the submission that we have already received?

Ms Stevens—It is.

CHAIR—So I do not need to move a motion on it.

Ms Stevens—No, you do not. It is just for you to refer to if you do not have a copy of it right now.

CHAIR—Thanks, Tamara.

Ms Stevens—AMEC's submission also highlighted the many difficulties currently facing the mineral exploration industry. These difficulties have been caused in large part by plummeting commodity prices across the board. Gold, however, has been particularly hard-hit. These commodity downturns have arisen from the Asian economic crisis and a range of

other global factors which together have all but decimated the availability of risk capital for mineral exploration. As I have just stated, the Australian gold industry has been particularly hard-hit. Gold exploration expenditure has dropped by \$174 million in the calendar year 1998 and many consider this to be a conservative estimate. Western Australia accounted for approximately \$120 million of the lost expenditure in relation to gold.

Given then that mineral exploration is a direct correlation with the value of mineral production and thus the net worth of the mining industry to the Australian economy, AMEC believes that state and Commonwealth governments can ill afford to ignore the exploration industry's current predicament as the Australian industry's future rests solely on the success of mineral exploration programs today.

Before going any further it is worth briefly touching on the industry's current importance to the Australian economy and the manner in which it has become the backbone of the Australian and Western Australian economies during the past three decades. To illustrate this, in 1967 the value of mineral and energy production totalled \$697 million, while in 1997-98 that figure reached \$39 billion. Better still, in 1998-99 mineral and energy exports reached an all-time high of \$40 billion, while in 1997-98 private new capital expenditure on mining totalled \$11 billion and that represents a 26 per cent increase on the previous year.

When these figures are added to the industry's contribution to direct and indirect employment—economic modelling by the University of Western Australia here in Perth has revealed that one job in the mining industry generates approximately 3.5 jobs elsewhere in the Australian economy; also total government mining revenues reached \$4.5 billion in 1997-98—the crucial importance of the mining industry to Australia's economic future becomes glaringly apparent. While the Commonwealth government's desire to increase value adding to Australia's mineral resources is an initiative AMEC wholeheartedly supports, the minerals must first be located and, secondly, mined. Given the sustained and significant decline in domestic exploration expenditures, realisation of this objective has become increasingly difficult.

Although governments cannot be held accountable for the vagaries of the free market, AMEC's submission to the committee does recommend a series of measures which, we believe, if implemented by the Commonwealth government would encourage and facilitate increased mineral exploration, resource development and downstream processing in Australia's resource sector through the creation of a more investor-friendly environment. The measures recommended by AMEC fall into the following broad categories, all of which AMEC representatives present today are more than happy to expand on during the question period, should the committee so desire.

The list is as follows: implementation of a flowthrough share scheme to stimulate investment in the mineral exploration sector; geoscientific data gathering; native title; taxation, specifically the Ralph business taxation review, with the research and development taxation concession a crucial factor; the environment, specifically the Commonwealth Environment Protection and Biodiversity Conservation Act 1998; intellectual property rights in the context of mining intellectual property; government intervention, specifically the RBA's gold sale and subsequent comments by the Prime Minister and Treasurer; sovereign risk as applicable to projects such as the Valhalla uranium prospect in Queensland, and

greenhouse controls; the location of value adding industries and projects in regional Australia, specifically the Commonwealth Regional Minerals Program as launched by the Hon. Warwick Parer, then Commonwealth Minister for Resources, in 1996; resource, licensing and permit arrangements, specifically the confusion and additional cost precipitated by duplicatory state and federal legislative regimes; and the Australian skills base, specifically the need to maintain and nurture Australia's formidable geological expertise and the Commonwealth government's recent treatment of the Australian Geological Survey Organisation, or AGSO.

In conclusion, AMEC has consistently held that the development of a nation's strengths and competitive advantages should form the basis of any economic or taxation strategy. Strategies of this nature should focus on industries with high growth potential. Contrary to speculation by certain misinformed commentators, considerable opportunities still exist to further develop and expand Australia's mineral and energy resources. While new industries such as financial services and information technology are viewed by many as the industries of the future, the Australian public and its elected political representatives cannot afford to disregard the Australian mineral industry's massive contribution to export income, employment and government revenues.

The government's desire to promote value adding in the minerals sector is timely and makes good economic sense. Success in this regard will, however, depend on the Commonwealth government making an equally strong commitment to ensuring that the resources sector is nurtured and encouraged during the current downturn and beyond. Thank you.

CHAIR—Thank you, Ms Stevens. I will start with a couple of questions. In your opening statement you mentioned about commodity prices and the difficulty that has caused. Do you think the recent improvement in prices for some commodities, particularly gold, will help the level of exploration activity to hopefully return to its previous levels?

Mr Savell—I would not go so far as to say 'return to its previous levels', because it certainly was the prolonged fall in commodity prices which triggered an investors' perception that gold was no longer the metal in which to invest. That was over a period of some two years. Any recovery in any exploration expenditures in the private sector for a particular metal therefore rests upon that investor perception. We have looked at a number of the statistics which have been derived from the consistent fall in the expenditures, in particular gold exploration, over the years and we believe that, in fact, from the 1997 peak of expenditures we have now gone off some \$240 million in total.

One thing that concerns us very much is that in the March quarter in 1999 to the June quarter in 1999, a three-month period, we saw for the first time that exploration expenditure had gone off—however slightly in some cases—in all metals. If one extrapolates that particular trend forward for another three quarters, we are going to see another \$57 million wiped off exploration expenditures in gold and in other metals. That is a concern to us and certainly goes to the point of your question, Mr Chairman; that is, what are the likely recovery times? We see the very best time that might be available to us would be at least another 12 months before we see a turnaround, but we are more inclined to say that this will

be a very slow filter-down process as investor perception changes. It may well be two years before we see a normalisation.

That goes back to my previous point, that I would not like to put an estimate on the amount of money that might be available. But we do see recovery. We are not being negative about it, but we do think it may be a little longer than some of the commentators think—and we say maybe two years—before we see real normality. That depends on whether or not, in the case of gold, the gold price holds up at a reasonable level, which is to put a figure on it somewhere beyond \$US300 per ounce.

CHAIR—In your submission, which was obviously prepared before the government's response to the Ralph report—

Ms Stevens—Yes.

CHAIR—would you like to make any comments now that the government's response has been released?

Mr Savell—Yes, we would. I will make a couple of comments and then ask Mrs Stevens to carry on with it. We believe that government has, in its business reform package, done as well as one could have expected it to have done with such a broad-ranging inquiry and we are, except in the case of one issue, very satisfied with the fairness of the package. The one issue which we are quite concerned about, because it goes to something dear to our heart which is business investment, is the rather muddled way that accelerated depreciation has been treated. Ms Stevens may like to expand on that.

Ms Stevens—Yes. It certainly appears, from what has been said by government and the Treasurer specifically, that the scheme as we know it has been abandoned and will only really apply to organisations with a turnover of less than \$1 million, which is of zero relevance to our member companies. Second to that is also that the criteria which might apply to companies and to projects that will qualify for the remaining concession, or the dramatically modified concession, is very unclear and we are very interested in the detail of the guidelines and have in fact written to the Treasurer requesting to be involved in discussions on the strategic investment allowance and how that will work in respect to projects.

In our initial submissions to the government on the Ralph report we lobbied strongly for the retention of things like the immediate deductibility of exploration expenditures and mining overburden removal. As Mr Savell has commented, we were very pleased to see that the government took heed of that and incorporated that in the review. Our single biggest issue is accelerated depreciation and we are seeking clarification in relation to that. We are also seeking to perhaps broaden the guidelines and their applicability to mining projects, not just necessarily a billion-dollar LNG plant—that type of thing.

Mr Savell—Chairman, there are a couple of things that need to perhaps be said. We, as you would probably be aware, talk to senior federal politicians and members of government and the opposition and the Democrats and everyone else all of the time. There seems to be a very different perception, depending on whom one discusses this matter with, on what that

million dollar, shall we say, exemption for small companies means. I have even heard from some people, 'Well, what are you worried about because really that's a million dollars net.' All of our taxation experts who have been asked this have told us it is not; it is \$1 million gross. Therefore, the 80 per cent question which the Treasurer persists in saying is most of the industry does not in fact encompass the industry's production. We are actually talking about contractors mainly when we are talking about that \$1 million, whether it is gross or net.

It is a very worrying attitude and what concerns us is that government has taken off the extreme bottom end of the industry for an exemption, which we agree with—these people do not need any more burdens—and the very big projects which obviously seem to be of great use to Australia, but what has really happened is that the major investment is in the middle among all of the medium sized and smaller companies. They are the ones which give the industry its huge dynamic. It is not the one huge project—for argument's sake another Olympic Dam or another Woodside—but it is all of the projects that roll on day by day—the \$10 million, the \$15 million, the \$20 million, the \$30 million, the \$100 million projects—that make the industry what it is.

We have not been given any sort of a threshold as to what will be a significant project and what will attach to that strategic investment allowance arrangement. It is a very worrying matter for the whole of the industry because it could very easily influence decisions of whether to invest now, or whether to invest at all, in some cases.

Mr ALLAN MORRIS—On the same point, Mr Savell, I thought you would have had two issues. One was that, and the second one was the R&D devaluation for the corporate tax—

Mr Savell—Yes, we do.

CHAIR—That was my next question.

Mr Savell—Sorry, I should have said the major issue. I do apologise for that. I was not trying to mislead you.

Ms Stevens—That is certainly an issue, yes.

CHAIR—We might lead into your views on R&D and tax concessions and what the government is doing which you feel is right and some of the difficulties you have got with R&D as well.

Mr Savell—In terms of R&D, I will make a quick statement and then ask Dr Bagshaw to deal with the matter because he is an expert on this. Looking at the question in general statistical terms, since the current government made the cut from 150 per cent deductibility to 125 per cent deductibility and then threw in a lot of uncertainty by saying, 'We'd really only like to have 100 per cent deductibility,' we have seen research and development expenditures cut back in total terms from a nice little growth back to where it was before the 150 per cent allowance was first put in place by a previous government.

So, in fact, we do not believe the government is getting its R&D policy right. We have actually told it this several times but we have not been successful in reversing that matter. We do believe that the 150 per cent is sufficient enticement to cause people to go into the investment. Another thing that we have been told, and this is anecdotal, is that some of the investment that would have taken place in Australia and some of the research in Australia is now being done elsewhere because there are more favourable taxation arrangements available. Having made that statement, perhaps Dr Bagshaw would like to continue.

CHAIR—I have just one question on that and then we will allow you to continue. Can you give us any specific examples of projects in R&D that you feel are not proceeding because of the cutback in investment? The changes were made simply because there was fear, a perception or a reality, that they were tax minimisation processes rather than real money going into real R&D. I would be interested if you could, either now or sometime in the future, give us any specific projects where you feel that there has been a measurable effect, or projects that have been scrapped.

Mr Savell—I do not have that sort of information because this is not actually my field. Dr Bagshaw may well have.

CHAIR—Yes, thank you.

Dr Bagshaw—I again cannot quote specific examples where a project has not proceeded because of the change in the taxation. I could probably get some information for you afterwards, but I think the main point to make here is that there has been a general decline in the amount of R&D in the industry we are talking about because of that change in the taxation. Let me make a number of points, please, on this issue of R&D.

I would commend to you—I brought a copy along and it is dated October 1990—a report to the Prime Minister's Science Council of the time on value adding in the Australian minerals industry. I am sure copies are still available. There is quite a wealth of information in here and in fact there is an article by Robin Batterham, who is now the Prime Minister's Chief Scientist, recently appointed.

CHAIR—I am sure we would be able to get copies of that and we will arrange for each member of the committee to get a copy.

Dr Bagshaw—It is a good database for you to refer to. Even though it is some nine or 10 years old now, there is a lot of relevant information that still applies there. I think there are some points to make in terms of R&D and particularly on the processing side but, before I make them, I would point out that in the exploration industry, which is very important to Australia and very important to this state, the smaller companies who operate in the exploration area regard their exploration as R&D, so they have a very strong focus and say, 'Yes, we do R&D.' That is going out and finding new ore deposits, which often they do not have the background or the financial clout to develop but are able to sell on to the larger operators. It is very important to think of R&D in that context also.

Now let me concentrate on R&D in the processing side, which is really more where I come from and where my background is. Let me take a couple of examples of the necessity

to do R&D in value adding. I am sure you are aware that there are three large new nickel laterite processes that have recently started up in Western Australia, the biggest of which are Anaconda Nickel, Murrin Murrin. We are talking about just over a billion dollars of investment. The two others, Cawse and Bulong, are slightly smaller but nevertheless are very significant.

Basically, the technology that those three companies are using was bought off-the-shelf by engineering companies and modelled on what had been happening in Cuba for the last 40 years and operated by the Russians. So you might presume that the technology was fairly robust but fairly simple. Those three new projects have now set up; they are still commissioning. However, the important point to make here is that there is going to be a huge amount of R&D required by each of those three operators to actually customise the process that they bought to operate efficiently, economically and safely in the context here. It is not just a question of taking a chequebook overseas, buying a process, bringing it into Australia, setting it up and turning on the switch.

The other example that I will take goes back many years but again it illustrates the point. Alcoa, the big aluminium company, came into Australia in 1963 and set up its first alumina refinery at Kwinana, just south of Perth, and it bought its technology for bauxite processing from the US. It built the plant to that design, it switched it on and, within a matter of days in some cases, and certainly within weeks, the whole thing fell apart. The reason for that is that the bauxite in Western Australia has a lot of quartz—very hard material, very abrasive—but that does not occur in the bauxites that were processed overseas in the US. They had to do a lot of R&D and a lot of redesign to cater for the characteristics of the local product. That is basically buying a technology from overseas.

If you want to value add to a resource you have and you want to use your own process or develop your own process, then I am sure you can imagine that the amount of R&D that needs to go on there is very large. It has to be very robust and you have to have the capabilities to go to and get that research done. Really the overall point I am making is that you can certainly value add. There are some very interesting multipliers here. If you take, for instance, ilmenite, and turn it into synthetic rutile, the value increases five times. There is a whole range of opportunities there.

However, what is the cost of doing that? If the cost is greater than the value adding, do not do it. You will not make any money. In that cost you must ensure that you have sufficient allowance for the necessary R&D.

CHAIR—Are you aware of this committee's report that has just been tabled in relation to the effects of certain public policies on R&D?

Dr Bagshaw—No, I am afraid I cannot claim that I am familiar with that, Mr Chairman.

CHAIR—We have just tabled that and I am sure you would find that very interesting. We can arrange to—

Dr Bagshaw—I would certainly appreciate a copy. Thank you.

Mr ALLAN MORRIS—Mind you, it is probably an interim report because so many things are changing. It was just before Ralph, so there were a lot of things you could not deal with. It is an ongoing debate. This R&D debate is not going to stop tomorrow.

Dr Bagshaw—Certainly not.

Mr ALLAN MORRIS—It is going to go on.

Mr Savell—Chairman, one other thing that perhaps ought to be also taken into account—and R&D does slot into this to a very great extent—is the marketing forces which determine the last point which Dr Bagshaw made: whether or not one should press on and produce a value added product of some sort, and its interrelationship with the people who are buying the product. There has been a lot of argument over the years, such as why we do not actually turn our iron ore into steel and then sell the steel to Japan and other customers. In many cases it is the customers' requirement. They have a particular process available which they want to use, or they want to keep their people employed, and therefore it has taken BHP quite a number of years to get to the actual reduction process so that they can on-sell them a more valuable product. So the market forces are very important, and R&D is most important in finding ways around that problem in producing a product which can be fed directly into somebody else's smelter or in some way will enhance the value adding process so that we get more money and we are not caught in that original marketing problem.

CHAIR—I just have to move on to native title and then I will hand over to the deputy chair, who may want to go back a little to our line of questioning before. In your submission you nominate that native title legislation is the most significant statutory disincentive to continued investment in mineral development. Do you have any specific example of major projects that have been held back and any further comments that you would like to make in relation to native title?

Mr Savell—Tamara, you had a number of projects which you put into case studies which the committee may like to see at some later time.

Ms Stevens—Yes. Back in March of last year, prior to amendments to the federal Native Title Act, we put together 15 case studies based specifically on member company experiences in relation to native title. They give some good examples of how the process and the legislation have sort of crippled these projects and stalled and delayed them during the process. But I suppose the one statistic that I will use to illustrate the impact native title has had, particularly in relation to exploration and mining in this state, is the number of titles stalled in the system. Prior to the advent of native title in the late 1980s and early 1990s at any given time in Western Australia—sort of the engine of mining, if you like—there were approximately 2½ thousand exploration mining titles, miscellaneous titles, anything to do with mining in the system, grinding through the system pending grant.

At the moment we are looking at a total figure of 12,000 stuck in the Western Australian system—this is in Western Australia alone. So that just gives you a snapshot of how the system has become gummed up and the titles are being stalled. Those people and the companies involved obviously cannot get their titles granted, cannot then get onto the ground, cannot drill holes, cannot do the exploration and cannot find ore bodies, so it is a

sort of a flow-on effect. We have had changes and amendments made to the federal act but we are now, in Western Australia, specifically trying to get through our state parliament a state regime and then we obviously have the federal parliament to encounter there as well. If you look at the 2½ thousand as opposed to the 12,000 we are currently faced with, it gives you a good idea of how it does represent what we think to be one of the biggest threats to continued mineral exploration in Western Australia.

CHAIR—Thank you. If you could provide us with those case studies, it would be very useful not only for this committee but also for me, wearing my other hat as a member of the Aboriginal and Torres Strait Islander Affairs Committee as well.

Ms Stevens—Yes.

Dr WASHER—The comment is, though, that through the upper house, statewide, we should have that sorted out very rapidly. At the next sitting it goes through and it is already nodded to be approved. Our big problem, however, is that it goes back to the Senate, and that is a pain.

Ms Stevens—Yes. The expectation is yes, that it will pass the state parliament in the short term but, as I indicated and you have confirmed, the Senate we anticipate to be a bit of a problem in relation to the Western Australian legislation and how that is amended by the Democrats and the ALP in the Senate.

Mr ALLAN MORRIS—As an observation, I think, until we get to a stage where the three participants—the Aboriginal people, the state government and the Commonwealth government—actually come to a common agreement and actually reconcile into a unified approach, that native title will dog us or bedevil us for decades. I think that really is the unfortunate part.

Can I firstly say your report is interesting, because I am more used to your industry being much more aggressive on some often quite narrow issues. This is actually quite interesting, particularly the parts about vertical integration and intellectual property rights. I want to take that up a bit more with you because that really is a matter that has not been well discussed in my circles or circles I have seen over quite a long time. By the way, this first-stage report is about benchmarking. In a moment we will come back to that but I just find your stuff on value adding is quite fascinating. There are clearly consortiums working, and you are working with Ausmine which is Austrade and which is getting government support and so on, and that really is a very exciting prospect. You do make some recommendations in your submission about that. I am just trying to find them.

Mr Savell—Page 20, I think, Mr Deputy Chairman. I think the point you are looking for is on page 20.

Mr ALLAN MORRIS—I will just try to draw you out some more, if I could, as to what we may do better. This has happened almost by accident. Ausmine was not accidental but it was not seen to be a major issue. Your idea that value added sales will actually exceed raw material sales in decades ahead is probably unheard of. In the common parlance on the east side, this is not recognised very well at all.

Ms Stevens—Certainly.

Mr Savell—There are some downsides to that, Mr Chairman, which we should discuss as well.

CHAIR—Which is that you may lose sales. Is that what you mean?

Mr ALLAN MORRIS—We could perhaps discuss the downsides.

Mr Savell—Do you want me to do this now?

CHAIR—Yes, please.

Mr Savell—Please do not get the idea that I am against any of this transfer of knowledge—

CHAIR—No.

Mr Savell—because I think it all helps in a global sense, but the movement overseas by Australian companies has been hallmarked by the fact that in many places in which they are working they do not have the sort of level of technology which they need to be able to continue with their particular processes of exploration or processing. So they tend to either take with them key elements, such as laboratory services or computer services or information technology services, so that they either deal with the matter in-house, as it were, as a company, or a laboratory might set up a laboratory next door to their mine site or on their mine site, and do the work for them there, or they transfer the information back to Australia for processing.

In cases of exploration, in many cases it is transferred back to West Perth and it is dealt with by a lot of information technology and other experts, and mine modelling and other matters are dealt with here. When we get the second stage of this expansion, and even sometimes in the first stage of the expansion into processing, we are in fact teaching other countries how to do it in a very high-tech manner. Now, there is nothing wrong with that, but the thing is that the production in those countries as time goes on will be in fact in competition with Australian production for a particular finite world market. So there are a couple of downsides in this.

The other thing that we need to take due care with is, unless the Australian mining industry stays more or less at the level it is now, that you are not going to have the breeding ground to update these technologies and to maintain these technologies. You really do need a live mining industry which has got problems which it is solving on a day-by-day basis to make all of this work.

Mr ALLAN MORRIS—Can I just put to you that perhaps another downside, or something that we should perhaps be thinking about, is that in amongst the world trade negotiations within the WTO and the rest of it, we perhaps have to start to put into that equation or that forum the need for countries to protect intellectual property rights and intellectual property capacity so that in fact it does not get hijacked in another country.

Mr Savell—Yes, absolutely.

Mr ALLAN MORRIS—Because it seems to me that our companies are actually very vulnerable. If you take technology to a country, it can be taken over.

Mr Savell—Yes.

Mr ALLAN MORRIS—And certainly the laws in some countries—

Mr Savell—Are slightly inadequate?

Mr ALLAN MORRIS—Yes. Has that been canvassed at all, or is that being discussed in your circles or in your fora?

Mr Savell—It has been. Every time we hear someone stand up and say, ‘Australia must become the clever country,’ on the one hand we laugh because, in most cases, they do not realise just how clever the mining industry is—

Mr ALLAN MORRIS—How clever we are—yes.

Mr Savell—and on the other hand we think about the fact that all of this free flow of information overseas is likely to work against us in the fact that we are going to make other industries more efficient in competition with ourselves.

Mr ALLAN MORRIS—Yes.

Mr Savell—Normally in some of the more remote countries, with a population that is much lower paid, they experience a much worse style of life, and therefore they are going to be able to produce that particular mineral or metal cheaper.

Mr ALLAN MORRIS—Yes. I can handle that in a way because if we are not doing it, somebody else will do it, whether it be the Russians or the Americans or somebody else. But what I am concerned about is whether or not we do enough to actually protect our companies when they are in that situation.

Mr Savell—I do not think we do.

Mr ALLAN MORRIS—And perhaps what you might put your minds to in terms of that, particularly to our next stage of this inquiry, is ways in which governments need to be more mindful in terms of world negotiations. I mean, we use WTO all the time to put up certain kinds of conditions of trade.

Mr Savell—Yes.

Mr ALLAN MORRIS—This, to my mind, is not currently part of them because we simply there rely on intellectual property rights and patents and copyrights and so on, which in this context are not necessarily all that relevant or all that applicable. I think the point you are making, and Mr Cribb made in that speech, is actually quite fascinating, and I would

love to see that perhaps taken further, to another stage. At the same time, linking into that, of course, are your comments about equipment. I can recall inquiries 15 years ago where we have been pressed to help our mining industry and manufacturers to export more and do more with exporting our equipment. We apparently have gone a long way down that track but, again, there does not seem to be any clear national focus on that. It seems to be an almost ad hoc thing.

Mr Savell—Yes.

Mr ALLAN MORRIS—And those two issues actually go together quite closely, as far as I can see.

Mr Savell—They do.

Mr ALLAN MORRIS—It is one that is not recognised, so if you have some thoughts in the future, for—again—maybe the next stage of the inquiry, as to how we can actually better focus on that, we would appreciate hearing them. Having said that, can I bring us back to this question about benchmarking.

Mr Savell—Sure.

Mr ALLAN MORRIS—This stage of the inquiry is trying to establish how we perform compared to other countries in terms of adding value to our capacity, whether it be primary industry or minerals. I think in here you make some comments—if not you, then others do—that we seem to be behind with titanium and in a number of other areas. Do you have any ideas or any feedback? How does your organisation believe we perform in terms of like countries with raw materials? Can you give us some help, because it is hard to work out criteria, it is hard to work out how to evaluate, and it is not being done, apparently.

Mr Savell—That is a question I think, Mr Deputy Chairman, that comes back to one of the original points I made about the marketing question. You have to look at this in terms of those countries which produce particular metals and then use the bulk of them, as opposed to countries—like Australia—that have traditionally exported raw materials or materials which were only partly processed because, quite frankly, we do not have a market big enough to use up much of our own production. They are two different categories, and I think really it needs to be approached in that way. If you compare Australia immediately to another country—say America or somewhere else—where they were mining a particular metal, you would find that there would be a much bigger market in some of those countries, or in countries adjoining, whereas we have to send our product many miles overseas for it to be used to the next stage.

So as I see it, they are two questions. I think it would be dangerous for the committee to just basically compare out of hand what happens in Australia with what is happening in, say, a range of other countries until you looked at the market conditions of the place and where they were using their production.

Mr ALLAN MORRIS—You have been sent all the submissions we have received.

Ms Stevens—No, we have not, actually.

Mr ALLAN MORRIS—Okay. There has been some material submitted by government departments with some international tables, which we agree are not necessarily all that compatible and may be inadequate. I guess we are trying to get people who are more knowledgeable than us and very expert in the field to try and give us some insight. What you are saying is that we should not form conclusions on inadequate evidence. We are likely to do that unless you perhaps help us.

Mr Savell—We would be delighted to do that, but I must hasten to say that we are not experts either. We are learning as we go, as you are.

Mr ALLAN MORRIS—If you have any observations that those matters raised in the submissions look a bit dodgy or whatever, could you perhaps give us some insight into how we may best address that. We hope, amongst ourselves, that we may be able to, particularly in the early stages, produce something that gives us some base point as to how we are performing across various ways, but that is likely to be very wrong unless people like you help give us some insight into where those mistakes might occur if we are not careful.

Mr Savell—Yes.

Mr Bagshaw—This is quite a complicated field, and you fully appreciate that.

Mr ALLAN MORRIS—We accept that, yes.

Mr Bagshaw—It is very much horses for courses. Mr Savell mentioned that a lot of raw materials and even processed materials that Australia produces have to be shipped overseas to markets. Let me briefly take the example of the titanium minerals industry, because again it is an important one for Australia. There is a lot of processing of titanium minerals to value added products here in Western Australia, but it goes through processes that are suited to the local conditions. One of the reasons for that is that up until fairly recently power costs have been far too great to bring in other types of processes. We are competing with Canada and South Africa, in particular, who use different processes because they have cheap power.

To add on to Mr Savell's comments, the Canadian operations are able to export directly by road or rail into the whole North American infrastructure, so they have a marked advantage anyway. But certainly it is very much horses for courses. We will try and get some of that information for you.

Mr ALLAN MORRIS—But in terms of these submissions, they have now come in and they are publicly available. As I said, we can either send you a copy, or they are on the webpage. The government department actually puts forward some tables and so on, and we are not sure whether they are reliable.

Mr Savell—We would be delighted to make some observations.

Mr ALLAN MORRIS—Thank you.

Dr WASHER—You said there was a flowthrough share scheme that is operational in Canada. How did that jell out? Has anyone got any feedback?

Mr Savell—On the Canadian scheme?

Dr WASHER—Yes. I know that the Canadian market is probably one of the biggest investors into certainly South America and Central America in terms of mining, and it has been a buoyant market historically, but has this made a difference?

Mr Savell—What happened from the time the scheme was instigated, from the information we have been able to obtain, both from Canada and from other sources, was that when it started off there was a natural high in investor confidence so therefore a lot of money flowed into the scheme in the first five years. There was a concern within the Canadian federal government that perhaps some of this money was not being applied in the proper way and that in fact it might be wasted on the wrong sorts of pursuits. So they instigated an inquiry and that inquiry came up with the view that, yes, there had been some problems in the early stages, and that there should be some changes so that these problems were overcome, but that in fact the scheme had achieved what it was set up to do, which was to generate risk capital for investment in the Canadian industry.

The scheme was left in place on that basis, five years into its life. It went on and in 1997, I think it was—it could have been 1998—the Canadian system generated something like 60 per cent of the risk capital spent on mineral exploration around the globe, which meant that in fact it was—as you said quite rightly—flowing into South America, and some into Australia, I might imagine, as well, and into Asia and into Africa. So in fact the Canadians finished up—I am quite sure accidentally—with a scheme which, having satisfied the national requirement, then generated so much capital that it was clear that they could actually invest that capital elsewhere, and they have been very successful in doing that. I understand the scheme now has settled back to a jog-along mode with perhaps \$150 million to \$200 million going into the scheme, and just topping up exploration programs where companies feel there is an opportunity.

The reason we thought the scheme would work in Australia is that Australia is very close to the Asian area and to Africa. In fact, if our government was to set in place a scheme of a similar nature, then we believe there would end up being two areas of the world—one, Canada and, two, Australia—which would control most of the global expenditure on mineral exploration. With the benefits that flow to it from expanded financial industry, from support for all our technical services and our expertise in research and development and other mining matters, this would be, in our view, a big insurance policy to ensure that the Australian mining industry stayed as it is now, at the cutting edge of world mining. It has a lot of flow-on effects which would benefit other parts of the economy, and that is in fact why we gave this scheme such a big promotion. The government has not told us it will not do it yet. It is still considering the matter.

Dr WASHER—One of the big problems is our energy consumption. I think our energy costs are reducing, and maybe that is partly due to privatisation or whatever, but it is certainly getting more rational. How are we going to meet these Kyoto requirements under your proposition? Do you consider that is a problem?

Mr Savell—Yes, we do consider that is a problem, and in fact if we are totally honest with you—and we will be—we do not believe we will meet the Kyoto commitments within a bull's roar, because in Western Australia we can take out the selvidge on Kyoto now.

Ms Stevens—The eight per cent increase permitted—

Mr Savell—It is just a joke.

Ms Stevens—Western Australia can of its own accord completely account for in excess of the eight per cent, and that is a national figure. So our considered opinion is that it is an impossible target, and an enormous issue for the mining industry in the short to medium term.

Dr WASHER—Yes, I agree. That is why I asked that.

Mr Savell—Mr Chairman, we would be delighted to, if it is permissible, provide answers to any questions that Dr Washer likes to give us and return them to you for your consideration.

CHAIR—Thank you. That was actually going to be my suggestion.

Dr WASHER—For stability of the industry and, to create value adding, we need stability. We mentioned governance and all these other things. How are workplace relations, which are not mentioned in any of this, working out? Are the new attitudes and agreements giving incentive to help in any way in value adding?

Mr Savell—We are not really in a position to go deeply into the industrial relations questions. That is a matter for the Australian Mines and Metals Association. They are the experts in that field. But all change I guess is resisted until someone understands it. It has been my outside view that these matters are now settling down, but I could be very wrong there and I must not hesitate to say I am not an expert in that field at all.

Dr WASHER—I will ask other questions later.

Mr ALLAN MORRIS—Could I remind you of the question on fringe benefits tax. That is all perhaps for a later stage, anyhow. If we are looking at this benchmarking stage and getting a future picture, those are the things one looks at.

Mr Savell—We will pursue the matters you raised.

Mr ALLAN MORRIS—I guess we will talk to you again, anyhow.

Mr Savell—You probably will.

CHAIR—Our committee was also looking at doing some case studies of particular industries. Would you like to nominate any particular industries that should be case studies? You might give that some thought and maybe make some suggestions to the committee at some other stage.

Mr Savell—Yes, we can. One of them is the gold industry, and this of course would need to be discussed with them. An ongoing success story in value adding is the Perth Mint, in gold. They have generated huge sales from value added items which are of the very highest quality, and they have taken some world markets away from the traditional providers. So, if they were agreeable, that would be an excellent case study for you.

CHAIR—All right.

Dr Bagshaw—You are talking to Iluka Resources later this morning. They will be an excellent example of the titanium industry.

Mr ALLAN MORRIS—We are also talking to somebody else about titanium as well, so there are a few things about titanium.

Mr Savell—I think you will find they will be excellent case studies as well because they have done a very good job.

CHAIR—I would like to thank all of you for your time and your evidence today. It has been very useful.

Mr Savell—Certainly.

[9.54 a.m.]

GYARMATHY, Mr Akos, General Manager, North West Shelf Gas

GERHARDY, Mr Steven, Commonwealth Approvals Coordinator, Woodside Energy Ltd

SMYTH, Ms Erica, Manager, External Affairs, Woodside Energy Ltd

CHAIR—Thank you and welcome. I have to remind you that the proceedings here today are legal proceedings of the parliament and warrant the same respect as proceedings in the House. The deliberate misleading of the committee may be regarded as contempt of parliament. The committee prefers that all evidence be given in public but should you at any stage wish to give evidence in private, you may ask to do so and the committee will give consideration to that request. Would you like to make an opening statement before we proceed?

Ms Smyth—Yes.

CHAIR—Please go ahead.

Ms Smyth—Thank you. Could I just take the opportunity to put our submission in context. Woodside is the operator of the North West Shelf project. It currently has about one-third of its gas going into the domestic market, and the majority of that gas is used by industry for value adding. The other two-thirds has value added to it in its own right by cooling down to minus 162 degrees Centigrade, and, via a very high-technology process, to be transported to Japan and other customers as liquefied natural gas.

Both of these parts of our business are extremely competitive in an international sense. In order for us to attract customers into the Western Australian gas using business we need, as a country and as a producer of natural gas, to be extremely competitive. As a producer of LNG we are finding it increasingly difficult to compete with other LNG producers. We therefore have two sections of our submission: the first will be concentrating on the domestic gas usage and value adding to our domestic gas product, and the second will be more about the general issues that relate to both domestic gas and LNG in the way of greenhouse and fiscal issues, and how we compare with our competitors. Akos Gyarmathy will deal with the first section and Steven Gerhardy with the second. Thank you.

Mr Gyarmathy—What we have will probably take about 15 minutes, and we will take you through this in two parts, me and then Steven. With North West Shelf Gas our future success is very much linked to the success of value adding, so I applaud your inquiry and hope that through combined efforts we can actually get more value adding for Western Australia. I would like to table with you some copies of overheads.

CHAIR—Thank you. The committee agrees to accept the overheads as exhibits.

Mr Gyarmathy—The first comment is that Western Australian industry will continue to develop soundly and will continue to have value adding occurring here. What we are talking about is the pace and the potential of that value adding. There is substantial value adding already occurring within the areas that Erica mentioned in our parts but also in our customers' areas—alumina, nickel—adding value to various other minerals in the state: iron ore and, relatively recently, direct reduced iron.

I overheard before comments about greenhouse and, of course, power generation from natural gas and the future growth of that. That will continue to occur and will give Western Australia and, I think, Australia substantial growth into the future. But I have to say that underplays the potential that Western Australia and Australia has to unleash step function growth from a range of other industries. I put them into two broad categories. One is industries that would make use of energy resources, in particular natural gas, together with minerals, or you will see on the chart there DRI and steel, and in fact to make natural gas into petrochemicals, whether they be ethane based petrochemicals or other forms of petrochemicals such as methanol and ammonia, and from that to have downstream industries occur here. We would submit that Western Australia has the potential for both, and if they could unlock that potential, then there would be substantial growth. On the chart there we talk in terajoules per day, and note there that a terajoule is about enough to supply half of Western Australia's residential demand for gas.

Mr ALLAN MORRIS—For how long?

Mr Gyarmathy—For a year.

Mr Gerhardy—Ten terajoules for a day.

Mr Gyarmathy—Out there on a typical day, all households in Perth would use 20 terajoules a day, so 10 terajoules a day would be enough to supply half the households in Perth. Therefore when one looks at the methanol and ammonia, we are looking at 160 terajoules a day for a typical methanol plant and, for an ammonia plant, about 70 and so forth. You can read through the chart there. We are talking about very large quantities of gas in the language of anyone around the world. There is also a lot of direct capital investment involved in such industries.

We think that Western Australia could potentially have two methanol plants and one or two ammonia plants. A gas to liquids plant is currently being contemplated for the state. Syntroleum, and ultimately two or three further DRI and steel plants, in the longer term could sensibly be located here in Western Australia.

There is very significant competition for these sorts of industries, and I just wanted to dwell a little bit on Trinidad and Tobago, which provide an excellent case study where a country with similar resources to Western Australia has done something about them. About 30 years ago they had oil and gas but the oil was depleting and they did not really have much other industry, so they built some jetties and hoped that industry would come. They are now the biggest exporter of ammonia of any country in the world. They are the biggest exporter of methanol of any country in the world. They do not have any iron ore—they import iron ore—but they use that iron ore together with some advanced technology to make

direct reduced iron in a similar way to BHP at the Port Hedland plant. They have stunned the LNG world with their success on their first LNG train—how quickly they got that up and running and how low-cost it is. There are now plans afoot to treble that.

A lot of that success was initiated by the government's role, and continues to be. Firstly, in resource type industries governments just fundamentally have a role to get the first investment to occur. Once the industry is established, then I am sure private industry can have a role, but, in the seeding of an industry, governments then and now have a fundamental role to play. So they did have that role. They have since maintained that role through innovative use of fiscal regimes, such as tax holidays and linking taxation rates to product prices. As they are a much smaller economy they had to do something and they have had stunning success.

Regardless of that, the companies that could invest in a plant in Trinidad or in another country, as all of these sorts of industries are globally mobile, have their choices about what they see as being attractive. There are numerous things that are attractive about Trinidad, not just the fiscal regimes but the cost of labour, the pace of decision making, and now the infrastructure and the critical mass of their development. Trinidad, as you can see by that little map, is around the other side of the world and in one way it is not a direct competitor to Australia because of sheer distance. Its products either have to go around the bottom of South America to get into North Asia and so forth or through the Panama Canal. Either way it is a long way and it is expensive, so Australia does have some advantages compared to Trinidad and Latin America by simple geography, with our target markets being the Asian region, as you know.

Of more direct competition is the Middle East, and Qatar is one such country. Australia, on the north-west arc as we call it, has about 100 trillion cubic feet of gas. Within the North West Shelf project we have about 30 trillion. Qatar has 380 trillion cubic feet of very substantial gas reserves. It has done more than that. It has spent \$US 1 billion developing infrastructure in advance of industry. It has developed ports, an industrial city, construction sites—beautiful flat ground—deep water ports and channels to get the big ships to take whatever product is being exported away. It has innovative labour arrangements there where it is not too expensive. They have, though, numerous disadvantages compared to Australia, and I will come to those later on.

What Western Australia and, I would submit, Australia has to offer is competitive gas prices. We have the lowest gas prices in this region. Other than for existing plants in Indonesia and Malaysia under previous regimes and previous arrangements, or new-built plants, we have cheaper gas in Western Australia than in other parts of Australia and the whole Asian region. We have world-scale gas reserves, and prospective developers, when they see our reserves—and frankly they are often not aware of the reserves that we have here—are amazed at the level of reserves we do have; the 100 trillion cubic feet that I mentioned before. We have strong supplier credentials. We have proximity to markets.

The next one is worth dwelling on because most of the value added projects are looking at project finance, and we pass muster when it comes to that. But in order to finally pass muster we need to overcome some of the challenges I will come to, which are basically development costs and so forth. We have low country risk, we have governments that want

growth, and I think there are renewed endeavours by state and federal governments there, and some of the softer things work well for us: the English language, a skilled work force.

We have some challenges and this is something we would submit the committee should turn its attention to. There are limited opportunities. We cannot afford to miss too many opportunities because there are relatively few, particularly because of the next point. If we do miss an opportunity and it does develop somewhere else then they develop the critical mass of industries. It is always easier to build another industry on top of an existing complex than a greenfield new industry. That is a challenge for Australia. We do not have our own hub.

We have a lack of infrastructure. We have fantastic roads and telecoms and all that sort of thing but we do not have wharves. We do not have the necessary infrastructure that the sorts of industries I mentioned before require. We have gas prices that are higher than other parts of the world: the Middle East and Latin America. We have some advantages. In particular, the Middle East has preservation of technical secrets and control of the project. Often they want more than 50 per cent control. But ultimately bankers will require that projects get built and they are going to be economic. If they face competition from the Middle East then that is a challenge for a project to be developed here in Australia.

There are some challenges in respect of native title and availability of suitable land. Here the main point is speed, especially project finance developments. They are all about speed. If they cannot move fast and if there is lack of certainty, that causes them to look elsewhere.

Later we are going to talk more about greenhouse gas issues but I would like to put one little rule of thumb for you. There has been discussion of \$US30 a tonne being the cost of greenhouse gas credits. If one of the industries I talked about earlier on—say methanol, which might emit a million tonnes per annum of carbon dioxide—it is going to do it somewhere in the world. If it locates in Australia, a methanol plant could have a million tonnes. Multiply it by \$30 a tonne—if it were the industry that had to bear that cost and not share it across Australia generally—and that is \$US30 million per annum. I do not have to say any more. If it has to wear that cost in Australia or go to another country around the world, you know where it is going to go.

Ms Smyth—Particularly when most of the gas hubs are located in non-annex B countries. So we are competing against non-annex B gas hubs.

Mr Gyarmathy—Tax regime and government incentives—more will be said about that later on—where we are not competitive in that area. That completes my part.

Mr Gerhardy—Could I perhaps pick up on three of those issues Akos just mentioned: construction costs in Australia, the tax regime and greenhouse. The construction cost is a significant factor simply because of the large capital requirement for these types of value adding plant. We are finding this with our own LNG project whereby we are planning to essentially double the size of the project—if not more—over the next 10 years by building more of these LNG processing trains. In our case each of these processing trains is about the length of a football field and probably three or four storeys high.

There is a lot of structural work, pipe work and so on, so therefore construction cost is a critical issue, the up-front capital cost. The studies we have done show that on the Burrup Peninsula for an expansion of our plant, or where for example a gas to liquids plant could be located and other sorts of value adding, construction costs are about 50 per cent to 80 per cent higher than building the same sort of plant in our main competitor countries like the Middle East at Oman and Malaysia. That is even after taking account of productivity changes. Of that 50 to 80 per cent higher it is mostly due to higher labour costs which account for around two-thirds of the premium we pay in Australia.

Total labour costs in the pool are about five times those of Trinidad and Oman, even after we take account of higher productivity in Australia, which we think is about twice that available in those countries, so it is a significant factor and it is an issue which companies coming to Australia wanting to build value adding plants have to address.

I will move on to tax regimes. There has been a lot of focus on the review of business tax lately. The issue of particular concern highlighted in this graph is the equivalent company tax rate on the left-hand side, which is a measure of the company tax rate taking account, to some degree, of tax holidays and so forth, versus depreciation write-off period on the horizontal axis. This is for LNG investment—companies wanting to build more LNG plants. Each one of these LNG processing trains costs around \$1½ billion to build, plus the extra infrastructure you need for ships and offshore facilities and so forth. They are big-dollar investments.

The analysis we have done shows that if you look at the depreciation write-off periods, for example, most of our competitors—particularly our strongest competitors like Indonesia, Malaysia, Oman and Qatar—have write-off periods of around five years. The value of that is that it enables them to claim more of their tax deductions up-front early in the project life when debt levels are highest and cash flow is at its worse because you are only slowly building up production. Conversely, more of the tax take is taken later in the project once those debt levels have been managed to some degree and brought down.

So even under the existing regime, whereby under the current accelerated depreciation regime we are able to write off most of our capital on average in about 7½ years, we are already behind the eight ball. The review of business tax decision announced a few weeks ago to abolish accelerated depreciation takes us out somewhere to the right-hand side of around 15 years on average at present, although there is a lot of uncertainty as to what that will be, because those rates are currently being reviewed. While this is for LNG, the same sort of comparison is relevant for most value adding industries. As you see on the front page, they all have high capital costs so the ability to be able to recover debt and earn a payback on the capital within a reasonable period of time is an important factor. That is one area where governments can help, by achieving a more back-end loaded taxation regime through the tax system.

To go on to greenhouse, Erica mentioned that most of our competition for LNG and these value adding types of industries is in countries which are not signatories to the Kyoto Protocol—they are non-annex B countries. LNG is somewhat different from other commodities in that we think it is part of the global solution to greenhouse rather than part of the problem, because LNG used in generating electricity has significantly less greenhouse

emissions attached to it than, say, coal or oil. The emissions are something like 43 per cent less than those from coal and about a third less than oil, when you take into account the whole emissions associated with the production, transport and use of that fuel.

Therefore LNG is a good greenhouse energy commodity and there needs to be a mechanism available whereby LNG globally can be promoted as a transitional fuel, until such time as renewables can provide the major bulk of energy. The difficulty at the moment is that every time we expand our LNG plant we emit more greenhouse emissions. There is no mechanism whereby the benefits attaching to LNG can be carried back to the LNG producers. Therefore, until such time as, for example, a trading system—if one is introduced—applies to all countries, including our competitors in non-annex B countries, any new LNG investment in Australia and similarly any new investment in gas to liquids or ammonia plants and so forth would be penalised if we had to bear carbon costs here.

CHAIR—Thank you very much for that very detailed submission. Dr Washer, I might allow you to take questions first.

Dr WASHER—Can I just focus on the greenhouse emission problem. That seems a fairly significant problem to be addressed because it is by treaty and negotiation. You mentioned areas like South America and others. I think they are excluded currently from that, or they come online some years later, do they not, before they meet these requirements?

Ms Smyth—That is correct, yes.

Dr WASHER—Can you elaborate on that?

Ms Smyth—Our main competition is actually from South-East Asia for LNG because the distance to be travelled by ship does not make Trinidad and Tobago competitors for us. It is more the developing countries that are not signatories to annex B and are exempt from the process at the moment that are our concern—Malaysia, Indonesia, Qatar.

Mr Gerhardy—For example, the only Asian economy which is a signatory, apart from Australia, is Japan. Our main competitors who are out there trying to seek these value adding industries are Indonesia, Malaysia, Thailand, China, Taiwan and India, and none of those are signatories.

Ms Smyth—The other important thing is that one of the big growing markets for our Australian LNG is China. China is not an annex B country but it does have a huge air quality issue. Part of its interest is to try and solve some of its air quality issues. It does not mind where it buys its LNG from. It does not have to worry about the greenhouse aspects of it. It is far more concerned about getting LNG in for clean air purposes.

Dr WASHER—From a value adding point of view what has been looked at in terms of disposing of the CO₂ released by this?

Mr Gerhardy—I guess there is a lot of research being done into different ways of reducing the production of CO₂ in Australia and certainly there are a number of steps our plant can take—and we think also industry generally could take—to reduce CO₂ emissions at a relatively low cost if there was some incentive to do so. One of the issues we have raised

in our submission on that final slide is about early movers not being penalised. By that we mean people who actually do take action early to reduce their emissions—and we are in that category—and so spend some money to do so, do then not find themselves penalised when it comes to being, say, granted emission permits later on when an emissions trading system is introduced.

Dr WASHER—Sure.

Mr Gerhardy—Because we fear that if we do something now and leave all the hard jobs until later, when that trading system comes in we are going to be punished; we are not going to have the options available to us to reduce our emissions and will have to pay whatever the going price is for permits. But the critical point is that LNG is regarded even now by Greenpeace and others in the world as a greenhouse-friendly fuel and an important fuel in this transition to a lower emission intensity world. The way the system is set up at the moment means that countries like us, that are part of the Kyoto Protocol, are disadvantaged compared to countries that are not, because even though total emissions resulting from LNG use are much less than from coal use, there are still significant emissions associated with the production of the LNG, mostly due to the actual cooling process for getting it down to minus 160 degrees. If we have to bear those emissions in Australia then that just makes the business uncompetitive.

Ms Smyth—The other point is that because of Australia's environmental standards we are invariably some of the most energy efficient and greenhouse responsible developers in the world. From an LNG perspective, we are one of the most efficient in terms of greenhouse gas emissions per tonne of LNG. Because we have good quality technology we do have an environmental process. I think we will find that the same thing applies to our domestic gas customers; they are low producers of greenhouse emissions compared with their competitors. If Australia, therefore, put barriers up to being able to afford to build in Australia because of greenhouse, that carbon leakage will just occur and go into the non-annex B countries, and the world as a whole will be worse off. So we do think about whether we are looking at this as a world solution rather than a country solution, and that is our main concern.

CHAIR—That issue has been raised by a number of companies. It is a very significant issue and a significant point.

Mr ALLAN MORRIS—The point about that, of course, which has been raised by others as well, is that we need to take into account things like transport. Greenhouse effects from transport are not taken into account and that penalises Australia perhaps unfairly. At this stage of the inquiry we are trying to get this benchmark and to get a feel of how we are going in the world. This inquiry is going to be perhaps in three separate stages. The first stage is getting a fix on where things are, the second stage is the case stage, and the third stage is perhaps in the more forward looking policy ideas and so on.

Coming back to the benchmark, I do not think it is your submission but somebody else's submission that talks about the difficulty of ethane production. We do not have, apparently, a great deal of ethane production. I confess I have been to your place a few times and talked to your people umpteen times and I did not know that. One is always learning in this

business. Can someone explain to me what that ethane question is about? Apparently our ethane production is actually very low, or the ethane content is very low.

Mr Gyarmathy—About eight to nine per cent of the gas naturally has ethane within that gas stream.

Ms Smyth—That is North West Shelf gas.

Mr Gyarmathy—Yes, the North West Shelf project. North West Shelf is unique in that sense. It just so happens, through our luck, that the ethane occurs in our acreage and has not occurred in neighbouring acreage that has been found, to date, in those sorts of quantities and those sorts of proportions. Ethane has a lot of value when included in LNG. You get Japanese top prices for it as a component of LNG. It is also very favourable in the production process because of its heating value is higher than methane. First there is methane, then ethane and then the LPGs.

If we can get to enough natural gas coming ashore from domestic gas, it could make sense to strip out the ethane and have a world-scale plant here. On our calculations and those of Dow Shell, who are the government's appointed bidder to develop a plant, we would need to get to about 1,100 terajoules a day from the North West Shelf project from its domestic sales. At the moment we are about half that, so we would need to build up sales in some of these other industries relatively quickly and have an assurance that we are going to be making those sales for the long term before we have the critical mass of enough gas on which to establish an ethane project. We would love to have one if, of course, it was economic.

Mr ALLAN MORRIS—Does that mean we have not got further with the petrochemical or chemical processing we have been talking about for a very long time because of that? Is that the key factor?

Ms Smyth—I think people are fixed on the view that petrochemicals processing requires ethane. There are a whole raft of types of processing that can be done that fall into the frame of petrochemicals. Many people would call methanol production a petrochemical production. Gas to liquids is petrochemical. It is the process. The ethane based petrochemical side, which naturally leads on to plastics and PVCs, needs ethane as a starter product. With many of the others you do not; they are methane based and we have plenty of methane. That is our main product.

Mr Gyarmathy—Technology has moved on since then. Methanol is another root, potentially, to ethane based products or to olefins, which is the same product chain that Erica was talking about. There are proponents here looking at Western Australia to get methanol directly to olefin and therefore the same end products that a methane based plant could have.

Mr ALLAN MORRIS—Secondly, with regard to the success or progress of DRI, I understand that BHP are not yet taking up their contracted levels of gas from you. How are those volumes looking downstream? Port Hedland seems to be well behind with its developmental agenda. Are other companies looking at you seriously at the moment in terms of using your gas for DRI?

Mr Gyarmathy—Sorry, could you repeat that?

Mr ALLAN MORRIS—I was asking firstly for a fix on how Port Hedland is going because that really is a major issue for all of us and, secondly, are there other companies looking more likely to use it? I do not want you to breach commercial- in-confidence, but are there other companies looking at it?

Mr Gyarmathy—At the AGA (Australian Gas Association) convention, which was held in Perth, the manager of BHP DRI got up and said, ‘The BHP plant is no longer a project. It’s now an operation.’ They are looking at a two-year ramp-up, so they are taking reasonable quantities of gas from us. They are able to sell all their output into the world market. He talked about the teething problems they were having, but the significance of the statement that it is no longer a project but an operation is quite important to recognise. They will have ongoing difficulties. We have had some arrangements with BHP to talk about how we contractually work out our gas sales and purchase commitments.

Mr ALLAN MORRIS—The reason I linked the two was that I have had a perception that BHP’s difficulties have actually discouraged others and made others much more cautious. Perhaps on the investment side of it people are not prepared to invest in DRI until BHP is proven to be very successful. It has been such a problematic project. Is there a perception amongst your potential gas users for DRI that that is now overcome? I suppose in amongst there is a complex matter in terms of our current performance levels compared to, say, Venezuela or Trinidad, as you mentioned, or various other countries in DRI production.

Mr Gyarmathy—Firstly, with most of the other proponents of DRI it has not helped them and particularly has not helped them with finance. Most of the other proponents believe that the problems of DRI are relatively unique to the circumstances in which BHP found themselves, both the management and the development side of that project. Most of the other proponents would say they believe they can overcome those factors that were unique to BHP. There still remain some major challenges for all of these industries because of development costs here in Australia, fiscal regimes and all of those other infrastructures.

There are a number of proponents around. Some of them have been resurrected now that have been on the radar for a while. DRI and steel looks more internationally attractive. It looks like it has passed the bottom and you will start to see quite a few of those proponents lift their profiles here in Western Australia. We are certainly talking to a number of them now. I do not want to get too carried away but it does look relatively promising.

Dr WASHER—At the moment the Ralph review, which I am sure you are well aware of, states revenue neutrality is a very important issue. That seems to be generally held as a gospel of godlike reality. I disagree with that but I would like your comment. You say that you would like to see this country produce more infrastructure. Governments have no money. They say, ‘How can we maintain revenue neutrality without encouraging that?’

Mr Gerhardy—Revenue neutrality is a bit of a two-edged sword. The economic modellers have had a look at, for an example, an LNG expansion project. A doubling of our LNG project would yield about \$1.5 billion of extra tax revenue to governments every year. That is an extra \$1.5 billion that would come from this sort of project. If the investment does

not come to Australia and our six joint venturers have investment options and other projects overseas, that is \$1.5 billion that just goes out the door every year. Maybe the government does have to spend some money to get a lot more money.

Mr Gyarmathy—You said it very well, and the same applies to all these domestic projects. We are talking about industries that will not come to Australia.

CHAIR—Thank you very much for your time and your submission, which has been very useful to the committee.

[10.35 a.m.]

VAN SANTEN, Mr Ronald Dionys, Director, ACTED Pty Ltd

CHAIR—I welcome the representative from ACTED. In what capacity do you appear before the committee?

Mr Van Santen—I am the director and owner of ACTED consultants. We have acted in that capacity for the last 12 years, specialising in chemical industries and related activities.

CHAIR—I have to remind you that the proceedings here today are legal proceedings of the parliament and warrant the same respect as proceedings in the House. The deliberate misleading of the committee may be regarded as a contempt of parliament. The committee prefers that all evidence be given in public, but should you at any stage wish to give evidence in private you may ask to do so and the committee will give consideration to your request. Do you have an opening statement that you would like to make?

Mr Van Santen—Yes, thank you. I think basically the thrust of my presentation is with you. I would, if I may take the opportunity, just elaborate and perhaps emphasise the key thrust of my presentation. The key difference to, I would suspect, most presentations—if I may be so presumptuous—is that it is not a question of allocation or reallocation of public and private benefits and questions of taxation and depreciated allowances and all the various things that are indirectly under the influence of government; it is more a question of promoting a system that provides for some integration—if that does not sound too abstract.

Obviously because of the background, it is focused on chemicals. Perhaps I did not emphasise this adequately, but it is an industry that currently has a turnover of \$18 billion and, allowing for net imports, you have an industry that has a market in Australia of about \$25 billion, of which then one-third is imported. When one takes into account our resource base in Australia, one would have to ask why the industry is so relatively small. I use the benchmark of its significance as a percentage of GDP. When one looks at the GDP significance of the industry, it is only about 1.3 per cent compared to countries without our resource base, such as even—taking an extreme example—the Netherlands. It is more than twice that size in GDP, twice that size in terms of people directly employed by the industry.

So what I am saying to you and what I am signalling is that the industry has a tremendous potential or at least is well below the size indicated by some fundamental factors. So what I am saying is there is a gap and there is a potential. We have a situation where the industry has contracted substantially, again measured by GDP, and the government has been very brave to promote a reduction in import tariffs. Import tariffs have been very important in creating an industry, and it has been equally significant in reducing its relative size. All that said, I would say that, as a result of this massive change that we have had, particularly in the last 25 years—the industry peaked in the mid-seventies, 1974-75, which you might note correlates with the removal of tariffs under the Whitlam government—there is presently an intellect vacuum in Australia.

On both sides, in terms of the private and public sector, I would suggest there is a lack of full appreciation, in-depth appreciation, of what some of the real issues are to adding value. I took particular note of the previous submission that talked about the ethane content. That is very relevant to Australia, and there are some very important economic issues that perhaps could be further explored. There are many examples of what I am saying about this intellect vacuum, if I may put it that way. I have exemplified some of those. Whether they are the best examples and whether they stand up to close scrutiny I will leave to others to fully decide, but the evidence to date suggests that I am correct. Indeed, I had a phone call from the Productivity Commission on Friday, provisionally agreeing with me about the Comalco assistance. That has an impact far beyond Queensland. It impacts on the Pilbara petrochemical project as well.

On the one hand, you have assistance being offered to an alumina refinery and you also have Senator Minchin in the United States making an offer to the venturers, and they are in a sense almost contradictory or undermining offers. I can go into and elaborate on that further. Part of my thrust is that there is opportunity for the government agencies to work together better, and to perhaps shift their role a little bit from looking after the public benefit to also start looking at some commercial benefits. There are some sideways steps that some of the agencies could make. I exemplified in my submission the opportunity that was presented for a PVC-free Olympic Games. That is rather significant. It was significant for Australia to have the potential for doing something, and it was an alternative, perhaps, to PVC.

That issue has not been properly looked at. It was an opportunity, a high-profile opportunity, for an alternative plastic to be developed. On a personal basis I was speaking in Shanghai and I had a managing director of a Chinese PVC company come to me and say, 'Ron, you gave us one hell of a fright'—or perhaps not quite in that sense—'that you could have run a flag up that Australia was promoting a PVC-free environment, and that could have damaged the industry.' Bear in mind that the sector of the industry that produces PVC employs only about 100 people. Admittedly it could have an influence on the prospects of the Pilbara petrochemical project, but it is a relatively small industry and it took the initiative to fund a CSIRO study and—surprise, surprise—it came out saying that the PVC was safe and benign. But it might have been an opportunity to explore an alternative.

I think what I would like to see is somebody, particularly in Canberra, saying, 'Yes, but'—in other words, saying, 'I hear what you have to say, but I would like to see that better explored and better explored in terms of some of the alternatives.' That alternative that I have signalled may be, for example, a polymer, a plastic, that is stabilised with titanium dioxide pigment, in which area we are world leaders. It may have created an opportunity for a green Australia, and whilst it may be only a niche market in the world context, in terms of the extent to which we penetrate that world market, it could have substantially boosted a new industry for Australia. It is something that I felt should have been looked at. Again, I do not know whether it is the best example, but it is certainly the thrust that I would like to promote: an alternative being considered at all times.

I believe there is outstanding potential for the government to build up and reinforce networks in Australia. I am well aware of some of the activities such as the cooperative research centres and the technology diffusion programs that are about, but I think there are other ways that present large multiplier benefits to the government in taking some leadership

and reorienting some of the institutions in Australia—professional institutions—to look more at government as a credible focus. I see a lot of opportunities there, without going into a great deal of detail at this point.

Basically, I would see the government becoming not a leader in the sense of picking winners but having a facilitative role in promoting a culture of change, to look at alternatives, to look at the opportunities and to evaluate them or at least allow for the community to evaluate some of the alternatives. That is presently a great weakness in Australia—that we do not have that strength within the public sector to fully consider all the alternatives, and that might include also the previous discussion on greenhouse gas emissions, for example.

What I would like to see—if I do not sound too messianic in the process—is the government becoming a catalyst for a new paradigm for adding value in Australia, and to take it away from the current obsessions—if I may put it strongly—in terms of the factor costs: questions of taxation, the question of depreciation allowances and other influences on commodity product manufacture. We must take this country from a stage 1 development of commodity production into smarter products. We have the capacity to do that, and there are real examples around Australia that are, I would suggest, at a nucleus stage, and they are the ones that I think the committee should look at, and look at ways and means that we can build these activities up.

There are foreign companies operating in Australia that are benefiting from our resource skills and developing their technology, and are using that overseas. We do not get any rent on that, we do not get a direct return on that, and I think it is something that should be looked at, because they can become nucleuses of bigger operations. Basically what I am saying, to close my submission, is that I see a great multiplier benefit for the government to expend very small resources and get some large returns, and that is really the basis of the general thrust of my submission.

CHAIR—Thank you. We might go back to what you mentioned about Comalco and the alumina refinery in Gladstone, and about Invest Australia's \$100 million offer. You were saying that that might have a net public cost by displacing the WA refineries. Do you want to expand a little bit on that?

Mr Van Santen—Yes. Looked at in isolation, the project is very important to the PNG gas line which requires a minimum base load, and the alumina refinery obviously at stage 1 of 20 petajoules of gas per year, from memory, will have a significant underpinning support for the project and, of course, it will be very helpful to Queensland. That said, it should also be looked at in the broader picture. The broader picture pulls in current alumina producers who have the capacity to expand with scale economies. I talk about Alcoa and Worsley, of course. It has an impact on the domestic gas draw.

In other words, if we are promoting the alumina refinery in Queensland, we are disadvantaging the current producers here in Western Australia. Let me stress that I have no relationship with these companies. This observation is totally nonpartisan. It has an impact obviously on their expansion, and their expansion will increase the domestic gas flow. And, as you heard from the previous submission, they, to support a petrochemical project in the

north of the state, will require a doubling of the domestic gas; in other words, the ethane is in limited supply, at least from along the domestic line. So, if we have a situation where the government is helping expansion at Comalco, you are indirectly limiting the amount of ethane that will be available for a potential petrochemical project.

Not to hang all of this argument simply on the potential project, let us recognise that it may never eventuate—and I have spoken variously overseas on the prospects of this project. It also has a question of undermining the offer as reported in the media—I do not know the substance obviously—that Senator Minchin is overseas negotiating directly with Dow. And if you are making an offer to Comalco, you are also then undermining the prospects of your project, and—if I am not stretching it too far—I say you are undermining the offer made by Senator Minchin. What I am basically saying is that the project needs to be more fully considered than in the context of Queensland alone.

CHAIR—Overall, how useful do you think Invest Australia and one-off grants such as that are for that sort of thing? I am talking about the grants that are provided through the Major Projects Facilitation Scheme.

Mr Van Santen—Certainly projects on the commodity level are negotiated on a world basis and, for example, in the case of the alumina refinery, it is a question of where is the cheapest location. If Malaysia offers a larger concession, whether it be by tax holidays or other means, which makes it more profitable to locate there, they will do so. Perhaps we should look more broadly than looking at whether the government should be providing \$100 million for an alumina business. Is there a prospect for identifying other activities which could present longer-term benefits to Australia other than alumina production, particularly as they would be in competition with existing operators? So it is useful in the sense of bidding internationally, but I would then question, ‘Are there alternatives available for Australia to look at facilitating other activities?’ and I have in mind possibly some that could have been furthered. There were a lot of projects that I think Australia lost as a result of somebody not being there and fully exploiting them.

CHAIR—Your submission advocates a permanent national agency for chemical industry based in Canberra. Do you want to expand a little bit more on what you see that role would be? Also I think in your submission you said there were discussions under way with the WA government to possibly seed such an agency. Is that going to be a state agency, or is it going to be a national agency?

Mr Van Santen—I am not too sure about the state question, but certainly on a national basis chemicals are rather different to many other commodity products, insofar as there are emotional aspects, there are environmental issues that impact and they are subject to a raft of international protocols and regulations. You have the various agencies, such as Environment Australia, the Chemical Weapons Convention Office and the National Occupational Health and Safety Commission. All those have an impact, sometimes directly, to different extents. What I am saying is that, if one had an agency, one could at least integrate some of the interests and biases that the various agencies have and perhaps try and rationalise both the regulations and look at how things can be shifted in a direction which might be more favourable for investment.

What I am saying is the concept of the agency is something that I see as particularly important at a federal level. In terms of the state, I do not recollect having made a reference about Western Australia. I will stand corrected there. Perhaps I should have reread it. It is some weeks since I looked at it. I have promoted the idea to the state government and I believe that they are at this stage considering looking at the industry based on some initiatives, but I cannot comment on that.

CHAIR—That is okay. Basically the membership of your industry peak body, Plastic and Chemical Industries Association, only includes one of the 24 significant Australian manufacturers. Is that correct?

Mr Van Santen—No, I would not say that. Based on their annual report there are 24 manufacturers on which the survey is based and they represent about \$6 billion of the \$33 billion of their membership turnover and, ipso facto, represent something like 25 per cent of Australia's chemical industry. But it is important to recognise that we do have an association of which manufacturing represents only a quarter of their turnover, and so if they are making representations they will have to bear in mind the influence it will have on the balance of their membership, in which case one can have a resultant compromise which may not be necessarily in the best interest of Australia. Also, you then have a question of who the companies are and their ownership and the types of products they produce and a whole raft of issues. It is a very delicate issue. I would not like to go into a great deal of detail there.

Mr ALLAN MORRIS—I guess we have been long hoping for growth in the chemical industry and I guess the point you are making there about being a single agency that actually channels that has some interest. But it is complicated, I suppose, by the fact that so many of the companies are actually large multinational companies where we are simply often just a marketing location for them rather than a development location. Can you perhaps respond to the concept that the mind-set amongst those companies is they are not headquartered here, they are basically here in relatively smaller volumes and would in fact probably resist Australia expanding its capacity, because that may well threaten their other plants in other parts of the world? You do not seem to touch very much on that vertical integration question where the world is carved up. Is that perhaps because you cannot offend your members? I do not know. How much is that a factor in it?

Mr Van Santen—It certainly was more relevant in past years, that question where it had regions marked as not being available. I was certainly very conscious of that in the eighties, but I think that demarcation which precluded exports in some regions is now becoming less with some of the companies becoming independent, notably ICI, for example, which is now Orica. From my perspective, I do not see it as a great obstacle. It is, however, important that new companies are not members of the industry association. I think that is very important from a perspective of having a body that represents what I identify as the new chemical companies such as Western Mining with their ammonium phosphate project. Here is a project that is unique in exporting more than half of its turnover. They are not a member of PACIA. BHP are looking at an ammonia urea project. They are again not a member of an industry association. Plenty River is another one that is looking at an ammonia project in the north of the state. So there are quite a few large operations that are establishing or potentially establishing that are not represented directly.

Mr ALLAN MORRIS—This part of the inquiry is predominantly trying to get a fix on where we are and how we are performing and at getting benchmarks and so on. Your submission does not actually touch on that very much. I am sorry, it does. It talks about things that inhibit investment and things of that nature, but you do not identify whether you think we are doing well. You do say we are not doing very well in certain particular areas, but your response to that is very generalised or very generic and you raise Comalco almost as a side issue of overall issues rather than a particular industry specific issue.

Mr Van Santen—Yes.

Mr ALLAN MORRIS—If I asked you what are the three major reasons why we are not doing as well as we should be in specific terms, what would your three major topics be?

Mr Van Santen—Let me say, first of all, in response to generic presentation, it is only a 20-page submission and I felt a need to present an alternative.

Mr ALLAN MORRIS—It was not a criticism. Don't get me wrong.

Mr Van Santen—No, but I felt a need. I have walked the corridors in Canberra representing industry, talking about all the things that you have heard and probably will continue to hear about taxation and carbon taxes and all the various things, so I felt I would not approach that. Perhaps in some respects it is far more important and perhaps those matters overwhelm some of the points that I have raised. I felt that it is unlikely that you will get a presentation of the type that I am presenting to you.

Mr ALLAN MORRIS—No, it is very useful.

Mr Van Santen—For that reason I have taken that line. So it is not necessarily that I am saying these are very important to Australia or to yourselves. That is why I took that line. To come back to your question of what I would suggest is the most important: from my perspective and looking at what is happening in other parts of the world—and a large part of the study that I am presently doing with supervision from the Curtin University here is to look at an alternative paradigm; I am sorry, I am not answering your question directly—creating a vision, creating a network, creating people that are starting to look in the same direction.

Mr ALLAN MORRIS—That is a way forward possibly, but what have been the three major reasons? Is it access to capital, is it government regulations, is it state competition, is it lack of awareness, is it investor resistance, is it global marketing strategies, is it technology, intellectual property rights we do not have to develop? There is a whole range of possible issues. Taxation, of course, is another one. But in your view what would be the three major reasons as to why that industry has not progressed further?

Mr Van Santen—I think to a large extent it is inertia. It is an industry that has grown to supply the domestic market. Protectionism invariably created that. It fragmented the industry. The industry has contracted and consolidated. It has done remarkably well to accommodate that change but, as a consequence of that, it has also crowded out investment. I can go into specific examples. I would say that the industry has not performed as well because there has

been inertia of that growth, a decline. I would suggest it has not grown because there is some crowding out, certainly in respect to Bass Strait. Bass Strait has never produced anything to Australia other than—if I could put it very bluntly—cheap gasoline. And that is simply the climate we had at that time. I would say that is the first reason the industry has not advanced.

Secondly, I think also it is having somebody to speak for them who understands the issues, being able to speak in a less partisan way to government, saying, 'Well, these are some of the things that could happen.' It is a very complex issue and I am thinking about specific examples as I am answering. I wish I had some notice of that question because it is very important.

Mr ALLAN MORRIS—You can respond to us later if you wish to.

Mr Van Santen—I definitely will.

Mr ALLAN MORRIS—The benefit of this kind of hearing is to actually dig into areas that do not come naturally or which are harder to handle.

Mr Van Santen—Yes. I would like to take the opportunity up, if I may. It is a very important question.

Mr ALLAN MORRIS—We are looking for your expertise to help us, so in a way we are trying to give you some areas that we need more help on. If you can give us a bit of a hand subsequently, that would be excellent.

Mr Van Santen—If I may, with your permission, I would say—and reinforcing my view—that there is not a good vehicle for communicating objective issues. There was a very good example and, whilst it was not one relating to manufacturing, it was relating to the chemical storage and handling, and that was in respect to Coode Island. There was an explosion in 1991 in Victoria. As a result of that, the government of Victoria allocated some \$15 million or so. I do not think the exact cost was brought to account, but certainly the public cost was \$15 million and on the private side probably a similar amount. It was never, ever asked whether there was an actual need to allocate. It was handled by somebody who came from outside the industry. The actual justification for its reallocation was never questioned. It just rolled on. There was a lot of money expended and the outcome was that it is still there today, which was a good outcome from my perspective. But it just signals that the system does not work properly. That is just one example and I could quote other examples. It is the system that I want to address and this is where I think your committee could have an influence.

CHAIR—Thank you.

Dr WASHER—What is your vision for how we could put industry clusters together?

Mr Van Santen—Clusters means bringing different operations together in a gain synergy. That is the strength of value adding around the world. It is where you get a fundamentally high-cost centre that operates against all the things you have heard and are

likely to hear about high-cost labour, high-cost construction, but these investments continue and what we need are clusters. We do not have clusters in Australia, unless you perhaps think in terms of Altona, but it is a very weak one. We have, for example, at the moment a consideration for an ammonia urea project in Victoria. That would be located, if it goes ahead and the feasibility shows that it is viable, at Lara, not at Altona.

It comes back to your question: has somebody looked at the cost and the benefit of seeing whether BHP or Incitec, its partner, can become a partner or can be encouraged to locate at Altona, or to look at the cost and the benefit and to look at it in terms of what else could develop? It comes back also to the question: what could evolve at Altona? There was a study done by SRI for half a million dollars. The outcome was never declared in public. It was made available to the government. The question is: what else could develop at Altona? Could this project by BHP be encouraged to relocate there and perhaps seed other projects? Perhaps it is a bad example, but it needs an integrative assessment of what are the projects they could establish in Australia, where could they locate and what would be required to facilitate these groups coming together. I think that is the sort of thinking. It is big picture stuff. Rather than looking at a caustic soda/EDC/VCM project in the north, perhaps they will think in terms of, 'Well, what else could develop? Could we be producing chlorine dioxide instead of VCM? Could we be producing methanol? And if that were to happen and this project were to happen, could a third one eventuate, and perhaps could that third one actually facilitate this project going ahead?'

At the moment, whilst the state government is no doubt doing its work here in assessing the projects and will be doing some of those things, I do sometimes wonder whether, on top of that, the federal government could look at it and say, 'Well, we're aware of these other projects,' and perhaps bring into issue some of the previous points I have raised in terms of Comalco, et cetera. It is big picture stuff and it is just looking at it like a chess set, looking at all the pieces and seeing whether they can be brought together, and promoting these, ultimately, clusters.

Dr WASHER—You mention here quite a bit about:

. . . relevant and quality expertise to shape a smart industry . . . promote the quality of education and training . . .
[skill based] excellence in chemical technologies—

et cetera. Do you feel that in our tertiary educational systems in Australia we are doing enough of that? Are we focusing and encouraging enough of that?

Mr Van Santen—That is a difficult question. I would reply in this sense: that overseas, the strength of chemical businesses and activities have come about because the educational institutions have worked very closely with industry. That really has been their strength. The problem in Australia is that either the industry is not here or, if it is here, it is old industry that is aimed at continuing its business on a lowest cost basis to basically see ways and means they can continue to operate. It is a sad reflection of Australia. There is a fundamental weakness in Australia. The educational institutions are encouraged to work with the industry but the industry is focused—or large commodity chemicals, anyway, are largely focused—on factor costs and ways and means of reducing cost. It introduces a bias which I do not think is healthy for the long-term development of Australia. What I am saying is: no, it is

suboptimal. We need to have people coming in from overseas to work with the educational institutions and to have that as part of that network. I can speak from first-hand experience on that. I can give examples where that is both not working and could be working.

CHAIR—Thank you very much.

Mr ALLAN MORRIS—Thank you. If there are any further comments you might want to make, particularly about that benchmarking and some of the obstacles to why we are not performing so well, they would be gratefully received.

Mr Van Santen—Yes. Thank you.

Dr WASHER—Could you also get some of these regulations over? It was a question I was going to ask but we have run out of time. I notice you wrote an article and it is quite fascinating. Could you highlight that a little bit, and some of our regulations in Australia that are a distraction from this?

Mr Van Santen—I am sorry, the article—

Dr WASHER—That you wrote on regulations.

Mr Van Santen—Part of the submission?

Dr WASHER—Yes.

Mr Van Santen—I see.

Dr WASHER—I think that is good, but if you wanted to highlight any more of that it would be well appreciated.

Mr Van Santen—Yes, I will do that, certainly. Benchmark regulations, yes.

CHAIR—Any other information that you would like to provide to the committee, we would be very pleased with.

Dr WASHER—That is something that, as governments, we can do readily and easily. Some of the other stuff is harder to do, but that is reasonably easy to do, so we should do it. We should do the easy stuff first.

Mr ALLAN MORRIS—I point out, Mr Van Santen, that all the other submissions are on the web site or else we can give you copies of them. Some of the other submissions touched on similar things that you touched on. I am not sure if you have seen them.

Mr Van Santen—I have seen some of them.

Mr ALLAN MORRIS—Any comments on other people's submissions would not go astray either.

Mr Van Santen—One of the problems in working this way, of course, is that you are relying on the goodwill of people. That is a problem.

Mr ALLAN MORRIS—Absolutely. We understand, but other submissions are there and they say similar things or, in fact, disagree with you. If you have an observation on other people's submissions, a public process is going on here and we would benefit from your expertise, because it is harder for us to work out this stuff than it is for you.

Mr Van Santen—Yes, indeed.

CHAIR—Thank you very much for your evidence. It has been very useful to the committee and we appreciate your time.

Mr Van Santen—My pleasure. Thank you.

[11.10 a.m.]

CROUCH, Mr Charles Armstrong, Executive Officer, Economic Affairs, Chamber of Minerals and Energy of Western Australia

SATCHWELL, Mr Ian David, Chief Executive Officer, Chamber of Minerals and Energy of Western Australia

EAMES, Mr Mark Richard, Manager, Commercial Gold, WMC Resources

CHAIR—Welcome. I have to remind you that the proceedings here today are legal proceedings of the parliament and warrant the same respect as proceedings in the House. A deliberate misleading of the committee may be regarded as contempt of parliament. The committee prefers that all evidence be given in public but should you at any stage wish to give evidence in private you may ask to do so and the committee will give consideration to your request. Do you have an opening statement that you would like to give?

Mr Satchwell—Yes, I do, Mr Chairman. I would like to introduce the Chamber of Minerals and Energy. We have been the peak minerals industry association in Western Australia since 1901 when we were established in Kalgoorlie as the representative body of the then fledgling minerals industry, based entirely on gold. Today the Chamber of Minerals and Energy represents mineral explorers, producers and service providers to the industry that together produce more than 90 per cent of Western Australia's mineral production by value. We are engaged in a full range of policy issues that impact on the minerals industry in Western Australia and we work closely with the Minerals Council of Australia on national issues. In that context we are very pleased to be making a presentation here before the committee today, and to have made the earlier submission.

I would like to touch on a few issues to do with the industry, particularly in relation to downstream processing, before moving on to some discussion about the policy environment, which I believe is your key area of interest. Currently the downstream processing industry, as distinct from the minerals extraction sector, represents about 50 per cent of all manufacturing in Western Australia. There are some excellent examples already, and there have been over many years, of downstream processing and value adding to our minerals in gold. Gold is Australia's second largest manufactured export, in fact, through the refining of the product. Iron ore is transferred to HBI, while nickel is produced traditionally through sulphide nickel mining, and smelting and refining in Western Australia, and now through production of nickel metal at LME standard directly on one site: dirt in one end, nickel metal out the other.

Of course, our large titanium minerals industry, which has rather held its light under a bushel for many years, is emerging and being recognised as a world-scale industry based here in Western Australia. Speaking of world-scale industries, of course, Western Australia's alumina industry, based on the world-class bauxite deposits in the Darling Ranges. These are some really excellent examples of how the minerals industry is already very actively engaged in downstream processing and value adding. Indeed, on our figures, downstream processing is a greater employer in Western Australia than the pure extraction of minerals. That is not

to belittle the extraction of minerals but just to cite one measure to demonstrate how much the industry is already involved in downstream processing.

In our submission we stated that downstream processing may not necessarily be value adding. We note that the committee's terms of reference include value adding as a generic term but we would caution that not all downstream processing is value adding. Indeed, if it is not, we believe that it should not proceed. It must be on a commercial basis.

Australia has a great competitive advantage in minerals extraction and, along with our competitive advantage in agriculture, that is what has delivered the economy as we know it today, which is now diversifying but is still very much underpinned by our minerals and agricultural industries. We do need to ensure that that competitive advantage is carried through to downstream processing.

This brings me, Mr Chairman, to some of the policy issues. First of all, we have a relatively small sized domestic market, as I am sure others have mentioned to you, and therefore projects developing in Western Australia and in the rest of the country need to be aimed primarily at the export market, and to do that we need to ensure that the products that they produce are world competitive. That usually points us towards world-scale operations increasingly, although of course there is room also for niche operations provided that they can produce that product at world competitive prices.

Some issues flowing with accessing international markets are, of course, trade barriers, and Australia has done a great job in promoting multilateral trade, the reduction of trade barriers and the lowering of tariffs around the world. We have been a leader in that and we need to remain ever vigilant and push further towards the lowering of international trade barriers to enable our products to compete fairly in world markets. We also need to be very vigilant against trade measures dressed up as environmental measures aimed at protecting alleged environmental issues. Some of those issues are real, some of them are perceived. We need to be very careful that we do not create trade barriers in another guise through those environmental measures.

We need to continue to push for microeconomic reform. We need to ensure that our labour markets are competitive, and in Western Australia we have a very good labour relations environment. We need to ensure that labour market reform continues down the track that it has been moving on. We need to ensure that tariff reform continues at the same pace as it has been continuing. We have applauded the tariff reform initiatives to date. We note that the government is undertaking a review of the tariff measures, and we will be saying to the government that that review needs to really ensure that tariff reform does continue.

Incidentally, I think it was in 1906 when tariff barriers were first introduced to protect Australia's manufacturing industries primarily in eastern states. The chamber was very strongly critical of the then government, so we have been consistent in our arguments right through.

CHAIR—Leading the field.

Mr Satchwell—Utility reform: water, gas and electricity are very important inputs to our industry and in particular energy costs are vital in ensuring our downstream processed products, which almost invariably have a fairly high proportion of energy as an input to them. We need to ensure that those energy costs are as low as possible. We need to ensure that there is adequate infrastructure, particularly adequate ports. A number of our ports are multi-user ports. Government has a role in there to ensure that there is adequate port infrastructure. Energy infrastructure, not just the availability of energy but the capacity to deliver it, is also important, along with adequate roads, et cetera.

Tax reform is a key issue for the industry. The industry has supported the government's tax reform initiative. We stated, when the government's initial response to the Ralph review was brought down some weeks ago, that the tax package was a mixed bag. Our member companies have been assessing the impact on them and really it does need to be done on a project by project, company by company basis. I think the feeling is, in general, that the tax package will be of benefit to the mineral sector, although the industry eagerly awaits the revised guidelines for the government's modified strategic investment initiative package. Those guidelines will point the way in which projects may be able to access some particular concessions. I am sure that not only the mineral sector but all other capital intensive sectors in Australia will be eagerly awaiting those guidelines.

One fear that I will elucidate is that those guidelines will go to facilitation of the very large projects and not to the medium and small scale projects—downstream processing, minerals extraction and infrastructure. Those medium and small scale projects, say two or three or four of them, may indeed equal the size of one large project which would qualify, while individually those small scale projects would not, which potentially would create some distortions, particularly in their ability to access capital.

Native title is a major issue for the exploration and the extractor sector of the industry. It is self-evident that if we do not find the mineral resources we cannot mine them and therefore we cannot develop any further processing. The Commonwealth native title system and the unworkability of that system continues in Western Australia and it is having a major impact on the expenditure on exploration and, indeed, on the ability of the industry to access land. It is having a negative impact on the ability of the industry to find new mineral deposits and develop new mines in the way in which and at the speed which will be necessary to sustain the industry, particularly the gold sector.

Finally, on the issue of greenhouse—and my colleagues may have some other comments, Mr Chairman—the international, national and state responses to the greenhouse issue will be crucial to the ability of Western Australia, indeed the whole nation, to host new downstream producing energy intensive projects. Western Australia as part of a developed or annex B country has arguably the greatest exposure to the negative impacts of international and national greenhouse policy. On our current projections Western Australia could, through further development of particularly downstream processing mineral and petroleum products, take up most if not all of Australia's notional eight per cent increase target between 1990 and 2008-2012. The manner in which this country and the international community responds to greenhouse will very much dictate our ability to continue to develop downstream processing that is world competitive.

If we are unable to do that, the highly likely outcome is that such projects will take place in other countries which are non-annex B or developing countries. There will be no global greenhouse benefit but we certainly will be exporting jobs and economic opportunity.

CHAIR—You are not the first organisation that has told us that.

Mr Satchwell—Mr Chairman, may I ask if any of my colleagues have any further comments before you have any questions for us?

CHAIR—Yes, indeed.

Mr Eames—I will just amplify, if I may, Mr Chairman. I think it is interesting looking at some of the examples in WA where the minerals industry has actually made substantial investments through time and downstream processing. I am sure you have heard several times about the BHP's HBI plant. That is a headline example, if you like. But I think it is interesting if you take WMC, for example, which essentially started in a very small way in nickel in 1968 and initially exported concentrates, so it really did very much the first stage of processing and then stopped there.

Subsequently it has put in place both a smelter at Kalgoorlie and a refinery based in Kwinana, and over time we have continued to add to those investments, producing more and more products. For example, we have recently commissioned a \$150 million acid plant at our nickel smelter which actually produces acid which, in turn, supports the construction of some of the new nickel laterite projects. So over a period of 30 years you have seen a substantial continuing move into the proportion of processed material from the underlying resources. That is likely to continue. Certainly my company, like most others in WA, is actively looking for opportunities to add value to its mineral products wherever possible.

The other one I pick out is in the gold sector. We have a strong gold industry—obviously overshadowed by price, and Ian has mentioned the native title issues in terms of exploration—but what has been interesting is that the gold industry has developed particularly in the last 20 years in WA and we have seen a move into downstream services. For example, you will find if you go to some remoter parts of Africa that drilling services or mining contract services are often provided by Australian companies who have got their start providing services in Australia. I think there has been a pattern over time, where the normal mechanism of the market allows for continuing development into further processing by the mineral sector. I think if you look around WA and Australia there are some excellent examples, almost across the board, of these sorts of things.

Mr Satchwell—It is a great opportunity too.

Mr Crouch—The only point I would like to make about what my colleagues have said relates to the structure of the Australian mining industry. If you look at what happens where in Australia, essentially when you talk about mining in the eastern states you are talking about the extraction of coal. The thing about coal is, essentially you dig it out of the ground and burn it. You can burn it here or you can burn it somewhere else but your ability to transform it into something else other than energy is extremely limited. The Western Australian mining industry is fundamentally different. A very large proportion of the non-

coalmining actually happens in WA and you have a very much wider range of options with the mining that is done in Western Australia. To a very large extent your potential for value adding, for further processing, is going to have very much of a Western Australian focus.

CHAIR—Thank you for that. The Western Australian state government has just recently provided us with a submission which you probably have not seen. In response to the Ralph review the state government told us that it wanted major project incentives provided as a multi-user infrastructure rather than project specific financial assistance, which I guess is effectively an all or nothing bet on a single project. Did you want to make some comments on that?

Mr Satchwell—That position from the Western Australian government we have not had in detail, but it is certainly an interesting approach that may go some way to addressing the problem I outlined about the large versus medium and smaller projects.

CHAIR—I will leave these couple of questions here. I am sure the deputy chairman would like to deal with petrochemical and I think Dr Washer would probably like to discuss greenhouse policy, so I will not gazump them on those. I think your submission has covered most of the questions I was going to ask.

Mr ALLAN MORRIS—I just place on record at the start that there have been a number of submissions that have said extracting is value adding because it actually increases the value in the process. I cannot disagree with that because it is self-evident, but there is also the point that it actually reduces the national assets at the same time, which is not ever said. The point needs to be made that simply extracting and selling, whilst it technically is obviously value adding, may also be value reducing.

The second point I want to make to your industry in general is about this question of whether or not secondary processing genuinely increases the value. You have to contrast that statement with the fact that for everything we sell at a lower value, and import finished products—like caustic soda, for example—we incur trade balance problems. We affect our currency, we affect our interest rates and we also affect our employment rates. In fact, the full equation in that really needs to be taken in to the fullest extent, not just the very narrow equations of looking at one slice of an economy—on the simple counter price, if you like. You also have to take into account the effect on national interest and the effect on national economy.

This is not a personal thing, but your industry in general takes a very narrow view in terms of value adding and a very narrow view in terms of the secondary value. All of us—you and us—are interested in the future of our country and we really should take a much broader view. I would love to see your industry at some time sit down and do a much broader examination of those two other parts. They are the loss of asset value, because once it is extracted it is no longer available, and the true value to the country, which is not simply the price it is sold for. There are a lot of other factors involved.

Having got that off my chest and onto the record, I want to say thanks for being involved. I am a bit puzzled about the difference between yourself and the Australian AMEC. Obviously you have shared roles and do a fair bit of intersecting because much of

your material is common. I do not doubt that you cooperate very closely with the state government and, between the two of you, you have covered the field very well. What we are trying to do in this part of the inquiry is to get a fix on how we are performing.

One of the problems we have is that there is apparently nothing available in Australia to say how we are performing across the field in value adding. The first stage is this idea of trying to get a benchmark and get a fix. The second stage is case studies. The third stage is more far-reaching implications of government policies and what we need to do. In that context, some of us are in a bit of a quandary because we do not know as much as you do about some of these things. I would very much appreciate your looking, if you could, at some of the other submissions that actually go to those questions. There are a couple of departmental submissions that talk about us compared to the world. There is a lot of terminology in there and a lot of complex evaluation criteria which we are not necessarily equipped to handle.

From the point of view of the inquiry progressing, it would be extremely useful if some observations could be made on some of the other submissions that are about that benchmark. That is a request to you and we would be really grateful. We also could perhaps talk to you again at a later stage. We have not worked that out yet, but down the stream as this inquiry progresses into its various stages we may come back to some witnesses about the next stages. If we can engage you now, we hopefully can keep you involved with us and that will be of mutual benefit.

Why haven't we done as well in value adding? In some fields we are very poor—for example, we are the world's biggest importer of caustic soda; I think AMEC's submission says that—yet we have all the resources to make caustic soda. What would you see as the two or three biggest reasons as to why we are not more successful in value adding? Has it been our size, our lack of technology, our lack of investment capital? Is it the fact that our customers often do not have resources, or significant influences within that? Have we just been apathetic or is it the fragmentation of the country across six states with six different state policies? In other words, if we want to address these issues, what are the two or three areas which you are the most concerned about?

Mr Eames—First I will make a few comments on that, if I can, just as a response and perhaps start some discussion if that is going to be helpful to the committee. Your first two points are very cogent. We as an industry have to get to grips with those. Your first one, which is that we actually have to take into account the subtraction of resource that is involved necessarily in our industry, is entirely valid. The general comment I make, though, is that we are now extracting resources in the mineral sector that would have been deemed completely worthless even as recently as 10 years ago.

Take one very recent example, nickel laterite projects, of which we have now developed three. We are essentially processing topsoil, processing material which is that weathered profile at the top of Australia. There are huge resources of lateritic nickel around the world, so the value of laterite in situ is nil, but we have actually managed to take an input resource which is essentially worthless and convert it into a finished product. A lot of the resources we are consuming are very low-value resources.

Secondly, we are continuing to invest to add to those resources in terms of exploration, so often our net stock of resources in front of us is actually building up all the time because we are adding value to the ground all the time by better delineating what is there and finding new ways of extracting what there is.

Mr ALLAN MORRIS—Adding value to the ground?

Mr Eames—Yes, genuinely so.

Mr ALLAN MORRIS—It is an unusual phrase. I must remember it.

Mr Eames—There are a number of examples of that which I think are worth pursuing as a line of argument. I think about what is in the interest of Australia and when I look at it I am quite convinced that the mining industry does add value to some resources, some ground which in other parts of the world essentially would not be worth a great deal.

You have picked out one example, caustic. We import very substantial amounts of caustic, particularly in the aluminium industry. I am not an expert on caustic and world markets for it, I have to say. There are many examples of input materials which we generate ourselves—cyanide and lime, for example; explosives. Generally speaking, where there is a good economic case or even a marginal economic case to use inputs or to move into inputs that would add value, the industry has done so. As I say, the caustic one is worth looking at.

Perhaps I could comment finally on how we are performing overall. I suppose what we have here is a difference in perception. I look at WA and look at an enormous part of the continent endowed with large resources but a very small population and no infrastructure. Primarily through the working of the minerals industry, we have seen that part of the continent transformed. We have done that by developing resources and processing them into valuable products. If you said, for example, at the time that WA was originally colonised, 'Instead we want to go into value adding and we'd like to establish a car industry,' I would suggest the population in WA would be very small indeed. One of the reasons that WA has grown and developed is that we have done things that have created value for the economy and for Australia.

The question is: when we look at how we progress as a country, do we want to put another dollar into an industry—the car industry may not be a good example—that has an indifferent record in terms of economic performance, or do we want to do more of the value adding that we have been able to demonstrate we can do well? This includes exploration, mining, mineral processing and selectively processing into value added products as we go. My vote lies with the second.

Mr ALLAN MORRIS—To put that in context, we export 130 million tonnes of iron ore worth \$3 billion. Our steel would be worth \$36 billion. I am not disagreeing with you and I am not really being negative about your industry, but that is just one example.

Mr Eames—Indeed.

Mr ALLAN MORRIS—One hundred and thirty million tonnes at \$23 a tonne of iron ore has to stand as a national failure in some way. There may be good reasons for that, but it has to stand. What are the reasons? Why is it that we seem to have that difficulty?

Mr Eames—I can speak reasonably dispassionately. I worked for a number of years for Hamersley Iron. I do not think it is a failure at all. We generate enormous wealth. We have constructed some of the best railroads in the world and we have developed the premier iron ore industry in the world. Iron is the fifth most commonly occurring element in the earth's crust; that industry could be anywhere else. You then look at the people we sell to—the Japanese and Korean steelmakers, for example—and I have to say it is often the case that those industries have an extremely patchy economic record. They often have dreadful environmental records. You only have to visit China to see that.

In a lot of the products steel is used for, you need to be close to the market. It is simply that we produce enough steel for our domestic market and then some. It is very difficult to actually argue that essentially what we are saying is we want the Chinese to forgo steelmaking and we will do it here. You have to then have access to their market. There are transport logistics and all those sorts of things. I suppose I am looking at it slightly differently. I genuinely do not see it as a failure. It would have cost enormous amounts of money to build a steel industry in Australia that would process all our iron ore. It would be, from my experience and from what I have seen of the steel industry worldwide, an unmitigated economic disaster were we to try and do so. In fact, our record as a country of moving downstream in steel has been patchy. That is an opposing view perhaps.

CHAIR—Just to clarify the record, Mr Morris, you mentioned a previous submission. I think you mentioned AMEC.

Mr ALLAN MORRIS—Association of Mining and Exploration Companies.

CHAIR—Sorry, the caustic soda example.

Mr ALLAN MORRIS—It was not in AMEC's; it was in somebody else's.

CHAIR—It was in ACTED.

Mr ALLAN MORRIS—It was in AMEC but there were two separate things.

CHAIR—That is all right.

Dr WASHER—This was not one of my questions, but to follow up on Allan's comment, I want you to sort of throw this back at me. It has been stated that perhaps within one or two decades when Russia does come online, its massive mineral resources much closer to our markets is going to give us a major headache in terms of competition. If we do hypothetically what Allan said and sit on it there, I think we are sitting on a major competitive factor. Would that be a true statement ultimately?

Mr Eames—The answer is no. The distance that is important in an economic mineral resource is the distance from the coast and those resources are essentially landlocked. A

company I worked for once spent a lot of time trying to actually ship alumina into Russia. Believe me, some of the distances and infrastructure issues are going to take many years to overcome. If you look at the threat, certainly in terms of the minerals and the further processing industries, Russia not only has a huge investment barrier to surmount but also it has—in the same way as Australia, actually—many of the same difficulties in terms of infrastructure, labour market and distance to deal with. So certainly in my experience, in terms of the major materials that Australia produces, I have not seen Russia as a credible threat.

Dr WASHER—On native title it looks like WA will be sorted out in terms of passing the native title. Do you see any problems now with the fact that that needs to go back to the Senate federally?

Mr Satchwell—Yes, judging from reports in the media, it looks as if the Native Title (State Provisions) Bill will pass the upper house, albeit in an amended form. It then does need to pass the Senate, and I have to say that we are not optimistic. We are hopeful but we are certainly not optimistic about the Attorney-General's determination with respect to that legislation being allowed by the Senate. That would be a great pity, because we would then in Western Australia continue under the federal Native Title Act and, notwithstanding the hard work and tough negotiations that led to that act, it is by no means perfect. There are some very serious practical issues with the operation of that act in Western Australia which we believe would be substantially addressed by a state act, and administering parts of the native title process through a state Native Title Commission.

Currently that does not seem likely to happen, although with politics being as they are there may be some sort of change. We were very disappointed, but we believe that most politicians and bureaucrats who were involved in this process now do recognise the reality of the native title situation and the unworkability of the native title system. For some time we have felt that in talking about the issues, people in important policy-making and decision-making positions did fail to recognise that. I think the current exploration downturn, while having several causes including the reduction in the gold price in particular, very much had its genesis in the unworkability of the system, and we still have some 11,000 mineral title applications caught up in some way in the titles and native title system. While that is there, inevitably it is investment forgone, and some of that investment inevitably goes elsewhere, which is a great pity. We believe in Australian companies investing offshore, but they should be doing so for the right reasons, not because they are unable to do so in Australia.

Dr WASHER—You did mention tax, accelerated depreciation, the negotiations that are ahead now for the mining industry to find some way to get a workable agreement with government so they do not lose too heavily in that. What other suggestions are you putting forward? Is there some simplicity? What is Treasury suggesting to you?

Mr Satchwell—Treasury has not so far, Dr Washer, suggested any specifics on the extension of the strategic investment initiative. All we can go on at the moment is the process administered by Mr Mansfield, but the government have said that they will bring out some new guidelines. As I said, we have yet to see those, and all of the industry is eagerly awaiting those guidelines just to see what mechanism may be put in place. In terms of what we would like to see, I think some transparency, some simplicity and, within that, some rules

so that potential investors know where they stand. If they are too loose, too open-ended, there is greater opportunity to go further down the picking winners path, rather than having greater certainty for investors up front.

Mr Crouch—Perhaps I could just pick up on that point, Dr Washer. I think that would be one of our major concerns with the package as at mid-September. There is a big question mark over the regime that future investors will face with regard to writing off their capital. There is obviously certainty with regard to other things like the tax rate and when that happens, but there is a big question of how the capital investment is going to be treated.

CHAIR—Did you want to make some comments on R&D tax concessions and possibly how the industry views the support you get through external R&D agencies such as the CSIRO and the cooperative research centres?

Mr Satchwell—Could I make a comment on R&D tax concessions initially. In discussions with the government prior to the government's response to the tax package being released, we made representations to at least maintain in real terms the 125 per cent R&D concession. Of course, moving to a 30 per cent tax rate lowers in real terms the 125 per cent. So we thought that the government had listened well—there were heads nodding—but it did not translate to the package, unfortunately, so there is further erosion of the R&D tax concession.

With respect to the support from bodies such as CSIRO, there is excellent cooperation between the minerals industry in Western Australia and CSIRO. Indeed, CSIRO will shortly be opening a new research centre at Bentley, and we look forward to a continuing close cooperation, increasingly on a commercial basis, between industry and CSIRO. With respect to the cooperative research centres at universities, again industry has been very heavily involved in their establishment and in their ongoing work. We are, I think, very happy with the relationship and the applied nature of their work. It is very closely aligned with the needs of industry.

Mr ALLAN MORRIS—Can I place a question on notice, gentlemen, about taxpayer-funded or supported research like, for example, HIs melt or the magnesium project. I am not sure about the nickel laterite one, but certainly HIs melt is one in which the technology, having been funded with substantial government funds—\$150 million or whatever in HIs melt—could then be taken offshore and used in other countries in competition with Australian development. I am not asking for an answer now, but that to me raises some fairly serious questions about how we should in fact support or not support. The aim was to help. We thought we were actually helping develop Australian resources, but it may well be that we are actually hindering Australian resource development.

If Rio Tinto, for example, used it in Korea or South Africa—particularly South Africa—that could in fact damage our exports into the same marketplaces. In the past, have you considered the question about government tax regimes and R&D tax roll-ups and so on being used in ways which may end up being injurious to Australian industries? I do not want a comment now, but perhaps you might think about it, because it is actually a fairly vexed question. If we go to the taxpayer asking for more support for R&D and so on and then people quote that example at us, it is a bit hard to answer, I can tell you. I have had it

quoted to me and I have no answer for it. It may be that your organisation may have some comments.

Mr Satchwell—Mr Morris, we will certainly think about that some more, but as an initial comment, we of course stand to benefit in Australia from R&D which may be similarly funded in other countries. I am sure there are numerous examples of that. The examples you cite may not be examples yet—they are possibilities of offshore investment—but that is all the more reason why we need to ensure a very competitive investment environment in Australia. The companies are not moving or proposing to invest offshore for cynical reasons, they are doing it for commercial reasons, and Australia therefore needs to ensure that it not only competes with respect to R&D concessions, but also is very competitive for investment.

Mr ALLAN MORRIS—I am sorry, we must be on a different wavelength there somewhere. What I am saying is, if HIs melt is established in South Africa and sells DRI into Asia, the capacity for us to invest in DRI production in Australia is therefore lessened, because the ownership of the technology is actually not Australian, so we cannot actually even use it. That is the question I am trying to raise. It actually locks us out. We are then locked out of using that technology.

Mr Satchwell—We will take that part of your question on notice.

Mr ALLAN MORRIS—So in other words, whether we become a cheap place to develop technology which is then used somewhere else is potentially a very real question in these kinds of regimes.

Mr Eames—As perhaps a general comment, there are two things about HIs melt that I think are interesting. One is that it certainly adds enormously to the general stock of prime metallurgical and/or processing skills in Australia, and those will have benefits, whatever happens to the specific configuration in which they are used in HIs melt. Secondly, HIs melt does extend the operating range of ores that can be processed, and over time I think that certainly will favour Australia and our endowment.

Mr ALLAN MORRIS—But who owns that? If we do not own it, we cannot use it. That is the question I am trying to get at.

Mr Eames—Yes, but I am making the point that, regardless of who owns the technology, the application of that technology perhaps has potential to benefit Australia favourably. Those are two general comments.

Mr ALLAN MORRIS—Except that with the magnesium example we cannot use magnesium technology here because the companies who own it will not let us use it, so we have to develop a whole new technology. There is no assurance that it would be actually accessible.

Mr Eames—Yes.

Mr ALLAN MORRIS—The example I am trying to raise is that there is an argument from the taxpayers at large that in giving those concessions, particularly to companies that have international and global interests, it could end up being against our national interests as well. It is something to think about.

Mr Eames—It certainly justifies a response.

Mr ALLAN MORRIS—People like me are trying to argue for these concessions to be extended to actually help our technology and our science and all the rest of it, but then you come up against that question and it really is very difficult to answer, I find.

Mr Eames—Although—again perhaps a general comment—as you go around the world and look at certainly the mining and minerals processing industry, you find that Australia is a leader.

Mr ALLAN MORRIS—I will just tell you that I cannot find a country in the world that allows its technology to be used against it, except us. You tell me a country that invests in technology which that country then cannot use. I cannot find one. Do not answer it now. It is a complex question and I am not wishing to trivialise it. It is one that may well be at the core of some of these public debate issues. If we cannot answer that question, we will have difficulty justifying extending those concessions in the way they have been so open-ended at the moment. In other words, the argument is that we hear about footloose capital. We can also hear about footloose research. It comes in because there is a great system running, but then eventually it is against the national interest because we have not actually thought through all the implications of it. That is the question.

CHAIR—That is an interesting scenario. I think we will leave it there, and certainly if you have an opportunity to respond, we would be more than interested in your comments. Further, if you do have any other comments further to your submissions that you would like to provide to the committee, please feel free to do so. Thank you very much for your time. I think the interaction has been very useful for the committee.

Mr Satchwell—Thank you.

[11.55 a.m.]

MACPHERSON, Mr Malcolm Hugh, Managing Director, Iluka Resources Ltd

CHAIR—Welcome to the proceedings. I have to remind you that the proceedings here today are legal proceedings of the parliament and warrant the same respect as proceedings in the House. The deliberate misleading of the committee may be regarded as contempt of the parliament. The committee prefers that all evidence be given in public, but should you at any stage wish to give evidence in private you may ask to do so and the committee will give consideration to your request. Do you have an opening statement that you would like to provide to the committee?

Mr Macpherson—I do not have a prepared statement, Chairman.

CHAIR—Do you have some opening comments that you would like to make?

Mr Macpherson—I am happy to make some opening comments, because it occurred to me that it was perhaps an opportunity for the committee to listen to an individual company's real experience. My company grew substantially in the 1980s through investment in downstream processing and I would like to argue that, even with the benefit of hindsight, we would not have done that but for the taxation regime that prevailed at the time and the R&D climate. Indeed, if we move now to the present, we have another project which we are not proceeding with because of the change in the paradigm opposite government support. So there is the chalk and cheese situation in my company.

CHAIR—That is interesting, because there is often comment made about the changes to the R&D tax concessions. But in most cases the people making the comments have not been able to produce specific evidence of where companies have decided not to proceed with ventures. So I would be interested in hearing about that.

Mr Macpherson—Yes. I can certainly give you recent events that I do not think prejudice our commercial-in-confidence position, but we are clearly on the record as having halted a project in its research phase because of the change in the regimes.

Mr ALLAN MORRIS—It is possible—not today—that perhaps a confidential submission might be provided. Mr Macpherson, are you saying there is a commercial-in-confidence matter?

Mr Macpherson—It would be, in terms of the detail, Mr Morris. But in the broad I could cover it in public.

Mr ALLAN MORRIS—The potential is there for you to give us a confidential submission and I would think the committee normally respects those things. I mean, we are just a bunch of politicians and if you think it would help us to better understand some of these issues and hence perhaps influence government policy, then confidential submissions are accepted for that. In fact, we are here to protect you.

Mr Macpherson—Understood.

Mr ALLAN MORRIS—But think about it. If you wish to, then please feel free.

Mr Macpherson—Yes.

CHAIR—There is obviously no obligation, Mr Macpherson. Should you feel that you want to provide it, if you make it very clear to the committee that that submission is an in camera submission, please feel free to do so, but that is totally your choice.

Mr ALLAN MORRIS—I confess I have not known a great deal about your company. I have heard a lot about your company, it is well regarded, but I guess I have had a problem with rutile mining coming from the New South Wales coast where so much of our coastline was savaged. The big trees that I used to see when I was walking around as a kid will never be there again, so I guess I have had an emotional blockage about rutile, but certainly the ilmenite and the titanium dioxide developments have been quite fascinating. I think AMEC made the point that we could develop a much stronger titanium dioxide industry up to the value of something like \$10 billion. I think it was AMEC's submission which raised that point fairly strongly. In your submission you raise a number of barriers.

Mr Macpherson—Indeed.

Mr ALLAN MORRIS—It was a bit hard for me. I did not quite get a picture of precisely what we should do as a country to have that happen. Your barriers were more generic than specific. Is it titanium dioxide that is a problem in itself or is it the processes?

Mr Macpherson—It is true to say, Mr Morris, that in making our presentation we are focusing very much on just one of the impediments, namely the research and development experience that we have had, given that we are not spending anything like the percentage of turnover that we would want to on an annual basis. We are currently at about \$1.5 million to \$2 million a year and our philosophy would have us spend \$10 million to \$15 million a year, provided there was some risk share. And we currently do not believe that is there. I did not really want to cover the ground that perhaps industry bodies could, and perhaps it is stating the obvious that resource securities are clearly fundamental to any value added decisions that we might make. This is a company, an example of the industry, where we operate a lot closer to where the rest of Australia wants to live; here in Western Australia we are in the south-west corner. We mine a lot of private land and we face issues that perhaps our colleagues do not face, mining crown land 1,000 kilometres or so away from the coast.

I make that point because if we are to make large investments, including in the titanium pigment industry, it needs to be founded on having comfort regarding long-term access to the resources that we have identified. I am not for one moment suggesting we have a current problem in that area, but it is not something we can take for granted.

Mr ALLAN MORRIS—In terms of your market supply, one of the issues we find is access to consumers, whether or not the industry has in fact integrated and you are outside the loop. Is that the case in your industry? Who buys the product? Who buys titanium oxide?

Mr Macpherson—The great bulk of titanium oxide ends up as a coating, typically in the paints industry or in the plastics industry or paper industry. There are four million tonnes per year approximately consumed around the world and approximately half of that would end up in a can of paint; I think that is perhaps the way to put it.

Mr ALLAN MORRIS—It is just sold on the open market. There is not an integration of the supplier-user chain?

Mr Macpherson—There is some integration. The major producers in the world are American based—Dupont and Millennium Chemicals are No. 1 and No. 2 in the world. Dupont does have its own links into the paint industry. Millennium does not, but there is some degree of integration.

Mr ALLAN MORRIS—What you are saying to me, I suppose, is that if you had resource security, if you could do the research adequately in terms of risk sharing, then the market is open to you with a product that would be competitive in price and market accessible.

Mr Macpherson—This is true. We are talking about a sector here where there has been a lot of technical change over the last several decades, and there continues to be. I believe, given our position in the world—for example, looking at my company, which produces one-quarter of the world's titanium minerals—we are not changing the rules as fast as we might like, if I could use that expression. We wish to do so. We want to capture more value in Australia. I think you can hear from me a sense of frustration that we do not believe we have the appropriate fiscal regime in place.

Mr ALLAN MORRIS—Mr Macpherson, if you were us and you advised the minister, 'Minister, if we were to do A, B, C and D, we believe this industry would in fact flourish and expand to a \$2 billion industry over time,' what would those three or four points be? This is not right now, but perhaps with some precision.

Mr Macpherson—Yes, I know what you mean.

Mr ALLAN MORRIS—In other words, think of it as though you were writing a report for us to submit to the minister and that says to the parliament, 'This is what we should do.'

Mr Macpherson—The thrust of the submission that I am making here is that one of those three would be the return to the R&D regimes that were initiated in the mid-1980s—that is, 150 per cent. People might say, 'Well, what's so magical about 150 per cent?' My answer to that is that it clearly worked from our perspective. It gave us the encouragement to take the sorts of risks that we no longer are prepared to take.

Dr WASHER—Malcolm, this will be the third time on record I have agreed totally. I think the need for 150 per cent is absolutely essential. I have been quoted on that a few times before and I just want to agree totally. Following on to tax, the Ralph review, that I am sure you followed—

Mr Macpherson—Indeed.

Dr WASHER—needs to be revenue neutral and at the cost, of course—as you may have heard—that accelerated depreciation is a trade-off to corporate tax rate reductions, et cetera. Do you agree with that concept? I mean in terms of the need for revenue neutrality and taxation.

Mr Macpherson—Frankly, I do not, to the extent that I followed the lead-up to the handing down of the Ralph report and the government's response. I always thought that the imperative of revenue neutrality was nothing more than a political imperative. Frankly, I am at a loss to understand why that should be so. We did not seem to go through the same rigour under other governments when company tax was moved, I think, on one occasion by three per cent, so why this time? That is just a rhetorical question on my part. I do not think it would surprise you if I say I fall into the camp that believes that the accelerated depreciation regimes and the general division 10 and other treatments have served Australia and the minerals industry very well. I am very disappointed—and that is probably putting it too mildly—that they appear to be headed for the scrap heap.

Dr WASHER—Can I assume that what you are telling me—and I tend to agree with you—is that you feel Treasury ultimately would benefit if they forgot about revenue neutrality and looked at it as an investment into their—

Mr Macpherson—That is exactly how I feel about it.

Dr WASHER—And that is how you make a profit? Is that what you are trying to say?

Mr Macpherson—This is right. I guess all we are talking about is the timing of taxation. If the hurdle is too high at the front end and we do not proceed with the project, then there is a revenue stream available to government that is never opened up. I could not put it more plainly than that. Certainly in my sector, what we saw in the 1980s—starting from the early eighties—was a sense of confidence. We moved away from the old paradigm which said that, 'Our customers are all in the Northern Hemisphere, therefore all the value added has to be done in the Northern Hemisphere,' to the situation today where Australia produces four or five times the amount of pigments that are actually consumed in this country.

We have been able to do that as an industry successfully. We were always told, 'No, you mustn't do that.' But in so doing, the money invested—I cannot recall a number off the top of my head, but it could not have been short of a billion dollars—was against a background of the 40 per cent accelerated depreciation. So the government has manifestly earned income from that ever since those plants went into production.

CHAIR—What about the changes in the Ralph report in relation to introducing venture capital into this country? I think they were very positive and significant changes. Do you have any comments on that in relation to your company as a trade-off to the other—

Mr Macpherson—I have not, the reason being that venture capital is not something we have traditionally wanted to tap. I think the sense of what we have been trying to do in a research and development area is move one pace at a time rather than leap out into the

unknown, where clearly there is a higher risk and therefore perhaps an appetite for venture capital. Does that help you?

CHAIR—Yes, that is fine.

Dr WASHER—Regarding the Kyoto conference agreement on greenhouse, I would like some of your comments on that from a global point of view and on what Australia's position, in your opinion, should be.

Mr Macpherson—I think Kyoto was an excellent outcome for Australia. It was certainly one that got up fairly late in the piece. Moreover, we seem to have a lack of a bipartisan approach in Australia. Where we are now, though, is somewhat problematic. I think if we are to take unilateral action and, even worse, take action which is targeted solely at industry in Australia, that is going to do very little to solve a global problem, and it is clearly going to negatively impact on Australian industry. I just hope that the Howard government can find a way to move from being locked into implementing Kyoto irrespective of where the US or any other country might be.

Mr ALLAN MORRIS—The information on titanium was actually partly mentioned in the ACTED inquiry and in the ACTED submission as well. Mr Macpherson, what we have been saying to witnesses is that for many people this is their first inquiry, but this has been going on for some time in a number of stages and we would be really interested in some feedback. We are trying to get a benchmark at the moment on how we are going as a country compared to the world: if we are doing well, why that is; and if we are doing badly, why that might be. Any insights you may have on other people's submissions might be helpful. I know you are too busy running a business to do that to a great degree, but it is on a web site and it may well be you could just scan any submissions that may touch on titanium or the things that you are interested in. I am at a bit of a loss to be able to pin that down. You are Western Australian, are you not?

Mr Macpherson—Indeed.

Mr ALLAN MORRIS—Over the years there have been a number of attempts to develop a chemical industry and a petrochemical industry. It always seems to come back to energy and access to gas. Is that right?

Mr Macpherson—Yes, indeed.

Mr ALLAN MORRIS—The changing energy price in the last four or five years—has that actually changed or have we got another excuse?

Mr Macpherson—I would answer this way: we had domestic gas supply situations put in place in the 1980s which meant that there was, if you like, a large cross-subsidy, so that regardless of where you were in terms of the pipeline position you paid the same for gas. That all changed when the old SECWA was broken into two. Quite clearly, gas is far cheaper in the Pilbara than it is in the south-west. It seems to me just a personal opinion that energy in the Pilbara is now attractively priced and so, at least in terms of the energy input, the way is open. Then surely it is a question of proponents making their judgments opposite

all the other factors they have to take into account, but I would be disappointed if it was being suggested that we cannot have value added in Western Australia because gas prices are too high. I do not think that is the reason that carries force the way it would have done prior to those changes.

Mr ALLAN MORRIS—I was just curious to know whether there were other reasons now. One is always suspicious that things like that are often used as covers not to go into any more detail. The gas price came down about four or five years ago, didn't it?

Mr Macpherson—Five years ago.

Mr ALLAN MORRIS—There does not appear to be much more progress. We are still talking about and going on about petrochemicals and about feasibility studies and so on, but we do not appear to have any. If gas price was the only impediment then you would have thought five years was enough time for things to actually happen and to have gone further.

Mr Macpherson—Yes.

Mr ALLAN MORRIS—As a Western Australian industrialist or whatever you would call yourself, do you see any other things? I guess I am apprehensive that we will find another reason why it will not go ahead. It appears to be coming through that it is now labour relations, by the way.

Mr Macpherson—I would be reluctant, in my position, to comment on another sector. Certainly I am very reluctant to comment publicly.

Mr ALLAN MORRIS—No, I understand that. I accept that. Some people are very happy to comment across the board but others are not, so I am not wishing to put you under any pressure there. When you get *Hansard* you will see the line of questioning we are taking. If you have any other comments you would like to make which you think will help us, we are looking for you to help. As a single company out there battling away, trying to do something yourself, you are well placed to comment, whereas often the industry bodies are a mass of contradictions. They have people on both sides within their membership so they cannot really be definitive, but as an individual company you can be. Even if that were confidential, though we cannot quote confidential material and therefore use it in the report, it is often helpful to us as an insight, to help us better understand and hence to ask better focused questions later. So keep that in mind as a possibility.

Mr Macpherson—All right, I will. Mr Lloyd, if I may, I would just like to make a comment about our relationship with the CSIRO as a major provider of research. I am certainly aware over the last two decades of a change—and one which I think is to be acknowledged positively in many ways—in that the CSIRO has been very successful, at least in some of its divisions, in going out and getting privately funded research. In some cases up to 30 or 40 per cent of their programs are now privately funded.

The negative of that, which I think goes to a question you asked earlier this morning, is that the provider of the funds then enters into a contractual relationship with CSIRO and for a period of time the benefits of that research are not available to other companies. I think

that is something which perhaps needs to be looked at more carefully. I am not suggesting there ought not to be any such contracts entered into but, given that they are contracts with a government organisation, I think the term of them should be shorter rather than longer. It seems to me, from the competitive nature of the industry and indeed the sector I am in, that whilst we have a lot of cooperation, say, on environmental research, we do not in other areas. But what we are really only looking for is a bit of a head start.

Let us argue that I have a process and I get into business and three years later, if by some means a competitor essentially gets that same information, I am going to be far more sanguine about it because I am already in business. Does that give you a sense of that earlier discussion?

Mr ALLAN MORRIS—Yes. It is a question we have been actually canvassing as well with CSIRO involvement. But, in that context, would you then argue that government should in fact retain a strong public interest provision so that some research funding should be seen to be publicly owned?

Mr Macpherson—I most certainly do. I say that without hesitation. I do believe that—otherwise why have a CSIRO?

Mr ALLAN MORRIS—It begs the question, does it not?

Mr Macpherson—That is the way I would see it. I do believe that we should sustain and nurture it. I happen to believe also that we are not getting enough bright, young people who are science trained—and why not? Because there is a limited number of places at universities. Perhaps in some areas of CSIRO there are also limitations.

Mr ALLAN MORRIS—Do you want to know a better reason?

Mr Macpherson—Please.

Mr ALLAN MORRIS—Because we more highly value in society doctors and lawyers, and our best and brightest brains end up in the two areas that require the least intellect.

Mr Macpherson—I am a bit biased. You can broaden out this natural interest thing. I think it helps my argument about why we need a strong R&D base in Australia. We help to get that if there is a sensible partnership between industry and government bodies. I am just one of a number of people who are terribly worried that we seem to be going backwards somewhat.

Mr ALLAN MORRIS—And cost recovery eventually wipes out public benefit or public interest.

Mr Macpherson—That is right, yes.

Dr WASHER—I think I understand what you are saying but I would like to clarify it.

Mr Macpherson—Certainly.

Dr WASHER—In other words, say hypothetically you decide to do a research project in cooperation with CSIRO and come up with a result that is now a patentable result.

Mr Macpherson—Yes, indeed.

Dr WASHER—So are you suggesting that the patent term be reduced now? Is that what you are suggesting? What is a normal patent term—16 to 20 years or whatever?

Mr Macpherson—Yes, it is fairly long term.

Dr WASHER—Yes. Practically, how were you suggesting it? I am the third party who can benefit from these technologies, but surely I can access that; I just need to pay the patent.

Mr Macpherson—Yes, you can.

Dr WASHER—Sorry, I did not quite understand the way that you tackled it.

Mr Macpherson—If we stay away from the words around ‘patent’ and let us just call it intellectual property and keep it fairly broad, it seems to me that if I want some research done in a particular area, the hypothetical is that I have a choice. I can either do it myself or contract with a non-government body and take the full risk on board and enjoy, if you like, complete freedom of the intellectual property; or I can go to the CSIRO where the rules say I have to share that intellectual property with the CSIRO and do so in the knowledge that they are not going to be able to tie it up indefinitely either. Call it a term like five years and then I will make a judgment: am I prepared to let someone else potentially get hold of a great discovery five years after I have started to commercialise it? I am suggesting to you the answer is, ‘Yes, I am.’

Dr WASHER—So what is the current situation? What happens at the moment? Say you do this, what happens?

Mr Macpherson—At the moment I could go along to CSIRO or another body and enter into a relationship which will lock anyone else out for a much longer period.

Mr ALLAN MORRIS—In other words, it is the old thing about accusations that the car industry, for example, is locked out of alternative engine techniques to protect the industry. They actually bought the patents or helped invest in the research and then held it tight and did not allow it to be used. So one of the arguments in any competition argument is that that company should actually invest in that research but not let them use it because they are still protecting their own industrial base, their own infrastructure, so that new technologies are not brought into the market because it is controlled by the people who own the old technology.

Dr WASHER—Can I just clarify one more thing. I did not pick up things quite so easily. The chair made a statement to you about the fact that the new tax arrangements seem to be very attractive from an overseas investment point of view into this country.

Mr Macpherson—That is for venture capital change?

Dr WASHER—Yes, for capital gains; I am just going back to that. I think what you highlighted was that that really does not do much for companies here wanting to invest in themselves and not requiring outside resources to do that.

Mr ALLAN MORRIS—And long-term investment.

Dr WASHER—Can I reinstate that as being a very clear statement you made?

Mr Macpherson—Yes, you can.

Mr ALLAN MORRIS—Yes, in long-term investment. If you are looking for profit streams rather than for share sales, then Ralph is not much for you. We are grateful for individual companies like yourself. We know you often do not have much time, but it is a very different insight from the association bodies.

Mr Macpherson—Thank you, understood.

CHAIR—Thank you, Mr Macpherson. Thank you very much for your evidence and the exchange of ideas as well. It is very useful to the committee. If you do have any further information you want to forward to the committee, please feel free to do so.

Mr Macpherson—Thank you for the invitation.

Resolved (on motion by **Mr Morris**, seconded by **Dr Washer**):

That this committee authorises publication, including publication on the parliamentary database, of the proof transcript of the evidence given before it at public hearing this day.

Committee adjourned at 12.25 p.m.