

## Rio Tinto 2019 Full Year Results

**26 February 2020**

**J-S JACQUES (Chief Executive):**

Now I am going to turn to questions. We have Chris in Perth, we have Alf in Montreal, we have Steve in Miami and we have Simon Trott, our Chief Commercial Officer – I am sure there will be lots of questions for you, Simon, on the outlook. Here I have Bold and I have Arnaud. Why don't we start?

**QUESTION:**

Two questions from me.

It's very, very admirable on the CO2 targets but could you just maybe comment on the financial costs to Rio of those targets? So if I look at Winu what's the things such as capex intensity, what's the project's parameters for access to power compared to a conventional mining project? Is there any material increase in the financial costs to Rio with these admirable targets?

Then the second question is on Mongolia. Could you maybe give us an update on the project in Mongolia in relation to the Government, and presumably how does a coal-fired power station fit into your carbon neutral targets?

**J-S JACQUES:**

Arnaud, you have just come back from Mongolia. Do you want to pick up the discussion on Mongolia?

**ARNAUD SOIRAT**

In terms of the power project in Mongolia, as you know, a commitment was made in 2009, through the Investment Agreement to invest in a coal power station and to source 100 per cent of the power within Mongolia. We have made a lot of progress on this project and we delivered to the government in February the feasibility study of a 300-megawatt coal power station based on the coal deposits which are called Tavan Tolgoi.

In parallel, we are also looking at some other projects, particularly in renewables, and we have shared some numbers with the government. So we are now at the stage where we are assessing with the government the different options.

So in terms of the impact of this project on our carbon footprint, it will depend on which option will be chosen with the government.

**J-S JACQUES:**

Thank you Arnaud. I think the important point to make here is currently the power is coming from China, from Inner Mongolia which is coal-fired, so from that perspective it is net but we are clear, as Arnaud is saying, we have an agreement. At the margin we can bring other source of power that we are working on, but not this year.

But the ambition remains the same, between now and 2030 we will have to reduce overall total emission by 15 per cent no matter what we do. So that is a massive undertaking.

On Winu do you want to say a few words Arnaud as well on renewables?

**ARNAUD SOIRAT**

On Winu, it is early stage, but we are already looking at different power solutions, including LNG or renewables. Personally I don't see actually clean power as a risk, I really see it as an opportunity. If you look all over the world at the cost of energy generated through renewables, particularly solar, it is becoming more and more competitive and so we are definitely looking at cleaner energy and renewable energy for Winu over potentially the medium to long term.

As J-S explained, we are looking at the first stage, which will be a smaller mine and then progressively growing, and so renewal power for Winu is both an opportunity to reduce our carbon footprint but potentially it is an opportunity to reduce our costs as well.

**J-S JACQUES:**

Just to wrap up, because your question I think is absolutely spot on, is what will be the financial impact?

I think it is important if you step back on climate change, we shouldn't forget what the first pillar of the climate change strategy is about, it is about supplying the product, the aluminium, the copper, the high quality iron ore or minerals for batteries that the world is going to require. Pretty often people focus only on the internal stuff, the cost and so forth but we should not forget the top line growth aspect as well. So that's the first aspect.

The second aspect is we have a lot of work between now and 2030, hence the 2030 targets. What we see is in order to underpin our strategy and our vision there is a billion dollars of capex and opex – we don't know how much is going to be capex and how much is going to be opex - that will be for the finance people to decide the allocation as always – but we are clear.

So are we concerned today when I look at the strength of our balance sheet? Are we concerned when I look at the quality of our assets base, the quality of our product and the quality of relationships with our customers, about our ability to deliver a superior returns as we have done for the last four years, a superior return to our Shareholders in the short, medium and long-term?

The answer is “no”, but we are flagging that the cost will be \$1 billion, which is fully embedded in our plan. So that is where we are at this point in time, but I think we will continue the dialogue for a long, long time.

**QUESTION:**

Two quick ones on iron ore, the first maybe for Jakob, I am just wondering if you could give us a bridge on the unit costs? You are saying flat year on year but it does sound like a lot of headwinds, so how much of that flat year on year is currency, how much of flat year on year is efficiency and maybe you could just walk us through that?

And then just more generally on iron ore, I think you are guiding flat in terms of volumes. You have always been a value over volume guy. Could you talk about the willingness of the business to flex iron ore supply depending on what’s going on in China?

**JAKOB STAUSHOLM:**

Just very quickly on that front, you are right there is a little assumption of a further strengthening of the US dollar compared to the average rate of the Australian dollar we saw last year – I think we saw 0.70 and we now assume 0.67. But we came out at 14.4 and we are guiding 14 to 15, so you can make your own assumptions whether the costs will be lower or be higher within that band.

There is no doubt that we are, and we have been very transparent for quite a while on this, that we are facing a couple of tough years in iron ore where we have to work the mines very hard until Koodaideri goes onstream and that means, and I was referring to in my presentation, the increase in the mine work index and more mining below water table which comes at a cost.

I think overall what you see is we are offsetting some the challenges with more productivity and that’s why we can guide a fairly unchanged cost.

I would also say as late as last week we were hit very badly by the cyclone that hit us straight in the port all the way down the rail line and therefore we had to reset the production guidance for the year.

**J-S JACQUES:**

Chris, if you are on the call, you are the one running this business. If you can tell us more details on the ground what you are doing in terms of productivity, in terms of asset productivity, in terms of people/labour productivity - Chris that would be great.

**CHRIS SALISBURY**

Thanks for the question. If we could just come back to the bridge on unit costs, Jakob was absolutely right on everything that he said, and if you look at the margin we delivered last year despite the additional costs it was a pretty good outcome after bouncing back in the second half.

Look, in terms of productivity we are facing headwinds. Jakob talked about the 12 per cent increase in haul length we are facing this year, which has really resulted in working the brownfield mines a lot harder, but to offset that we are continuing to push on automation. 50 per cent of our truck fleet is now automated, we have a pathway to 80 per cent and of course we have previously disclosed that decreases costs by 15 to 20 per cent.

Look, we are continuing to push on the next wave of productivity, particularly the focus on data, and we have a series of projects and have outlined a number of these at the last capital markets day, which I think is really the next horizon in the cost efficiencies. Then finally of course the investments we are making in Koodaideri and Western Turner Syncline 2 will come through and are both lower cost and we will see benefit from those as well. Thanks J-S.

**J-S JACQUES:**

Thanks Chris. I don't know if everybody heard as we couldn't hear very well here. So push harder on automation on the trucks and the target is to get to 80 per cent in the coming years. That is the automation of the trucks and it is in the plan. It is about using more of the data across the system and remember that Koodaideri will be the first of the next wave of intelligent mines with twins in the cloud that we can increase the availability of the mine.

Now there are pockets of labour inflation in the Pilbara as we speak but it is very focused, very targeted. As Chris said, at the end of the day what we are driving is the margins and we delivered 72 per cent EBITDA margin in the Pilbara.

Simon, do you want to say how you look at the value over volume approach for iron ore, the blending you are doing in China, because you have done some great stuff this year and you are doing this year, and then maybe I will come back to Chris about what value over volume means in practical terms in the Pilbara.

**SIMON TROTT:**

I guess looking at the market as it stands, at the moment obviously coming into 2020 reasonably strong. There is a pick-up in key industrial indicators and then of course obviously Covid has emerged towards the end of January. We are working very closely with our customers and our suppliers as we work our way through that.

We just went out and spoke to around about 200 or so of our customers and suppliers on similar themes to that we are seeing, certainly a shortage in terms of labour and restrictions on logistics, particularly trucking logistics.

Also some of the steel mills, domestic supplies of things like fluxes, access to scrap have been somewhat curtailed, so you are seeing EAF rates drop considerably and a lot of the fleet are largely closed certainly into March. Blast furnaces are less impacted, and as you look through the short-term disruption in places beyond that, there are some implications for the full year.

We have seen stimulus measures really in two phases and currently are very focused on availability of credit and making sure those businesses with cash-flow constraints continue through. Then obviously the next phase is going to be much more targeted towards consumption, towards infrastructure, some of that more commodity-intensive.

So we are working very closely with customers looking through the short-term disruptions, they are obviously looking to that, to a medium-term resumption and some of that infrastructure spend, clearly additional optionality like the portside trading gets us closer to the market and also gives us some optionality in terms of response.

You have certainly seen in the last few days a little bit of a pick-up at the back end of the ports as some of those trucking restrictions ease, so that is going to create some opportunities for us as we go through the balance of the year.

**J-S JACQUES:**

Thank you, Simon. So we have no impact on iron ore today. If you look at the stats, if you look at the port stats for iron ore and I know you are looking at them very carefully, the inventory has not increased, the majority is flowing.

Because, I think if I step back at the macro level, during the Chinese New Year you don't stop a blast furnace unless you are forced to. You can slow it down but what you can do very easily is stop/shut down the EAF converters, and that's what they have done.

So the demand for iron ore did remain pretty strong throughout the Chinese New Year. What we are working very carefully is how much steel is stuck, you know, rebar, slabs etc is stuck in the value chain, the supply chain between the upstream and the downstream, and that's the piece we are watching very carefully.

But as we are having this conversation we don't have any problem in moving our iron ore products, our high-quality iron ore products, from the Pilbara back into China.

So can I move to a couple of questions on the call and then I will come back to London after?

**QUESTION:**

The first question, J-S is on OT, a question on the mine design. You stated that the removal of two of three mid-access drives has had an unfavourable impact on the schedule. Does this mean we can expect the delay to be more towards the 30 months end of the guidance range now?

And then a question, J-S, for the bauxite market. Your bauxite guidance for 2020 implies limited growth and that's despite completing and spending \$2.5 billion on 25 Mt of new capacity of Amrun and CBG. So my indication here is that the growth continues in Guinea, exports have caught you by surprise, and the question is have you changed your view on the bauxite market or did you get this wrong? Thanks.

**J-S JACQUES:**

Well, why don't we start with bauxite? Alf, you are on the call, can you pick up this one?

**ALF BARRIOS:**

Thank you for the question. In terms of markets, if you look at the market the global bauxite mining is expected to grow by about 4 to 5 per cent in 2020 and we expect Chinese imports also to grow at a higher rate, around 20 per cent, in 2020 with new coastal plants ramping up and more inland refining and using imported bauxite as a result of the Chinese domestic depletion and also quality and environmental controls.

In that market scenario if you look at what we have been doing, we have been growing - Amrun achieved its design capacity rate of 23 Mt a year in the fourth quarter of 2019.

The mine delivers 50 per cent replacement and 50 per cent growth and the asset is a significantly long-term advantaged asset. It is in close proximity to our refining assets in Queensland and our other customers in China at the other end of the cost curve. It was delivered, as you mentioned before, early and under budget.

It is a high-quality product and it increases efficiency in our Gladstone refineries with the remaining export volumes sold to our Chinese customers. Yes, supplies from Guinea have come faster than we expected but we are positive on demand from the markets to deliver a strong value from Cape York.

In 2019, as mentioned before by Jakob, our production performance enabled us to increase shipments of bauxite volumes to third parties by 21 per cent to 40 Mt. If you look at the last five years we have increased our third party bauxite sales by 60 Mt, and that's

a 70 per cent increase, maintaining our position as the leading global supplier in the seaborne bauxite trade.

We will continue to operate on a value over volume basis, optimising our production by grade from Amrun, East Weipa, Andoom and Gove to supply the Gladstone refineries and market demand. So overall, I think we see a trajectory of successful growth and we will continue to explore options to continue to grow, but our focus clearly is on value over volume and optimising.

**J-S JACQUES:**

Thank you, Alf. I would add only one point or strengthen the point made by Alf about the growth. There is no doubt especially back to the discussion on climate change, the point I made earlier that if there is a need for more aluminium, there will be a need for more high-quality bauxite. The whole question for us is, we have options to grow in Guinea; we have options to grow in South America; we have options to grow in Australia.

The question for us is how to develop the pathway at the right capital intensity to make sure that those options are attractive from an economic standpoint. So it is not a question about the next 5 years, if you a 10, 15 or 20 year perspective because there will be a need for more bauxite, the question is to find a pathway because the competition from China is very strong. And it is not only about bauxite, it is across aluminium, it is across iron ore and a big chunk of the work that we are currently doing with the team is how can we improve the capital intensity in a way to leverage a Chinese experience/approach to build mines or to building smelters in order to make sure that we can participate in the growth and create value.

If I move to your other question, it is on Oyu Tolgoi. I have got Steve on the call.

**STEPHEN McINTOSH**

Maybe I can start J-S, so thanks. As you will remember, originally we had said there was about a three month benefit by having the mid access drive in Panel Zero, the mid access drive across the three levels, Apex, Undercut and Extraction.

As we went through all of the modelling and the updated geo-tech work we took the decision that we would remove the Undercut and Extraction mid-access drives, we kept the Apex. Obviously in that we will lose a little bit of the benefit as originally planned but I think the piece I want to focus on is we have been working very hard on the productivity underground, as you probably will have seen with Turquoise Hill end of year announcement the high lateral development rates in December, so very high rates now of lateral development productivity underground.

We obviously now have the new mine design which will come together in the second quarter of this year and really once we have that we will understand the location of the

ore handling system, the options relating to panel sequencing during the mining operations, and therefore obviously we will have a better understanding of the schedule and cost impact ranges. So those things are ahead, and equally we've said definitive estimate in the second half of this year.

**J-S JACQUES:**

Thank you Steve. Another question from the call and then I will come back to London.

**QUESTION:**

Just to circle back on the CO2 targets you are setting yourself, the capex spend or the climate spend of one billion dollars, can you sort of give us an idea of how far towards the target does that get?

Obviously then when looking at your assets and some of charts of the presentation Pacific Aluminium continues to stand out in terms of its carbon intensity. What are the options with all those assets? I know that two of them or one of them is under review but what are the options for the whole asset base?

**J-S JACQUES:**

On the billion dollars, first of all the billion dollars is not only capex, it can be opex. I will give you a sense; I will give you a couple of examples of how we are going to spend the money going forward.

One will be about investing in the re-powering of our system and I think a good example of it is, the \$100 million we disclosed last week in the Pilbara, which is to build a solar farm and battery in the Pilbara to support our iron ore business.

We have a pipeline of such projects which are under assessment and therefore during the next 10 years we will do more and more of those, so switching from one source of fuel to another source of fuel.

In the context of the Pilbara the beauty of it, if I may put it this way, is that it is a closed system, we totally control the system, and we have invested a few years ago in very efficient gas turbines which you can switch on/switch off very easily and therefore providing firming of the specific grid which is very important.

What people shouldn't forget is, yes, renewables will give you a lower cost but if you don't have firming in place because as we all the sun shines only during daytime and the wind doesn't work all the time. So you need the firming, it is something that is very important.

And in the context of the Pilbara the firming is there through those high efficiency gas turbines and therefore enables us to invest further in the renewables as an example. So



there will be more investment in what we describe as the re-powering of our existing needs.

The second item where I can give you a sense of where we are going to spend the money is on technology and I think I am going to use the example from the speech.

If you look at the aluminium industry a big chunk of the carbon which is generated by the aluminium industry is about the power, if you burn coal as an example, or in the anodes, because you need the an anode to convey the electricity in the cells in order to smelt the alumina into aluminium.

The technology we are developing with Alcoa and Apple and the Government of Canada and Quebec is to move away from the carbon based anodes that as it is consumed releases CO<sub>2</sub> to an inert anode in order to make sure that as and when you convey the power through the cells you don't release CO<sub>2</sub>.

So it will be a combination of things but physical, primarily about renewables and technology because the concern I have today, if I may sound negative, is not what we are going to do between now and 2030 – between now and 2030 is going to be primarily based on existing technology – the real question we have is how do we move from 2030 to 2050?

If we don't develop the new technologies, the new partnerships now, we will not be ready by 2030, and therefore we've tried to strike the right balance.

The last item I would to say is that the billion dollars is for the next five years and clearly we will spend more money in the following five years to get to the 2030 target.

The second question is about PACAL. I think I can't make it clearer and simpler and is on PACAL, so we are talking about mainly three assets, we are talking about Tasmania, Bell Bay, which is hydro-based, so from an emissions standpoint there are no issues whatsoever. It is really a discussion with the relevant authorities in order to strike the right tariff, the right power cost, in order to make sure that this smelter can carry on for the benefit of Rio shareholders, for the customers and for the benefit of the communities going forward. The discussions are underway, those are private conversations, when we get to a solution, we will disclose it.

Then we have two other smelters in Australia, one is in New South Wales called Tomago and the other one is in Gladstone. They are currently mainly supplied from coal fired powered stations and therefore there are two questions now being discussed as we are having this conversation.

One is about the cost of power because at the end of the day if you are not profitable then there is no way forward. As a minimum you need to be profitable. And then you

need to develop in partnership with your relevant suppliers or governments a roadmap to be able to secure the right green energy over time.

Once again those discussions are underway, private conversations, and I don't think it would be appropriate for me to say anything above and beyond that, but as I've mentioned time is of the essence. You see from the press release the profitability of the assets, there is a real urgency to tackle them and that is what we are doing at this point in time.

So to answer the question, the options are from finding a new power contract and ensuring the long-term viability of the assets to all other options, as you can imagine. But the priority is, because I believe there is a way forward, is to find the right source of power at the right cost and that's what we are doing at this point in time.

We will go back to London.

**QUESTION:**

Two questions, one on your commodity exposure and strategy. You as a Group seem to remain quite positive about diamonds; you want to maintain exposure and Falcon project, earned the distinction of being mentioned today in the press release. At the same time you seem to be rather disinterested in gold as a separate exposure. Is this something you are thinking about? Can this change going forward or are there reasons why you think gold just doesn't belong to your mix?

**ARNAUD SOIRAT**

Why do we like diamonds? Because it's a great business to be in. We have got the know-how which is recognised, you have got a brand with a true reputation and it is a business that generates strong dividend margins. The challenge we have got in Rio with our diamond business is Argyle is going to be closed by the end of this year and we will do it very responsibly and we are making great progress in preparing for the closure.

Diavik could be closed in the coming 3 to 5 years and therefore that's the reason why we are investing in Falcon. On top of it we are investing in exploration and the ventures team led by Bold we are looking potential M&A options only where we can create value for shareholders. Our strong desire to stay in the diamond business because it is a highly profitable business and we have got a good brand to create value for our Shareholders.

**J-S JACQUES:**

We continue to put the pressure on our exploration teams. On average if it takes 25 years to find copper, between the time people find some nice coloured rocks to cashflows, diamonds is 30 years and therefore that is where you need to take a long-term perspective. But we like diamonds and in our model, let's be clear, we believe that synthetic diamonds will capture some market share but nevertheless good quality diamonds have a future and we want to be part of it. It is challenging but we are spending money and we are looking into it.

We are in the gold business today as a by-product. I mean we have been in the gold business for a long time. At Oyu Tolgoi I know that the gold grades at this point in time are lower but as and when we go underground the gold content will increase because at the end of the day Oyu Tolgoi is in simple terms is a big lump of copper and gold. So, are we in the gold business? We are in the gold business.

Kennecott: we have been in the gold business at Kennecott for 125 years but it is as a by-product. Are we interested in gold? The answer is "yes".

On exploration, and I know it is different from the past, I fully accept that, if today our exploration teams find a good gold deposit I think we may keep it in the portfolio. We believe in diversification and gold could be part of it.

**QUESTION:**

First, just going back to Oyu Tolgoi and I'm thinking about the politics and where we are with that, the recent development looking for international arbitration around the tax audit doesn't sort of feel good as you look at it from the outside, but can you give us a sense of where those discussions are around investment agreements and what compromises you may have to make there?

And then maybe going back to Elysis, when can we have a concrete kind of step forward there? Is that going to be a big profitable kind of option more than just a climate change dynamic?

There is a last question on net debt, whether you think the balance sheet is getting lazy and what do you think will be the ideal net debt range?

**J-S JACQUES:**

I will start with Elysis, it is very simple. Next time you go through the Saguenay in Quebec you will see a big pilot plant, a big cell using the Elysis technology. So when you ask about concrete steps, the pilot plant is being built as we speak. It will take some time.

The industry has been producing aluminium for 100 years and we have been trying for 100 years not to use carbon. But for the first time we believe, and Arnaud and myself have been in the industry for 25 years, we may have the solution on this.

We will ramp up slowly but surely. It is not an easy one, but we believe the combination of the know-how of Rio on the cell design especially from France and the know-how of Alcoa on the other side, is we may have cracked the code. But we need to ramp it slowly but surely, so that we can have a large scale pilot as we speak and then the next stage will be invest in four or five cells in one of the existing operations to take it further.

Do I believe it will have a big impact in the next 10 years? The answer is "yes". But, as I mentioned earlier, if we don't develop the technology now we will never be ready now beyond 2030. So it is the time to invest and that's what we are doing on this one.

OT politics Arnaud, and then I will come back to Jakob.

**ARNAUD SOIRAT**

In terms of the tax, you will remember that we had an audit for the years 2013 to 2015 in January 2018 asking for an additional \$155 million. Just to put things in perspective, typically it would be around \$200 million to \$300 million per year, so it is not insignificant. We have worked a lot with the government's representatives and the tax authority in the country to genuinely look for settlements.

We made a couple of offers in writing and after lots of discussions with the government we both came to the conclusion that actually in the current context of Mongolia, the current political context of Mongolia, and based on the challenges of the finding of this audit the best way forward was to agree to go to arbitration.

You know, you describe it as 'not so good' but fundamentally I see it actually as a sign of a healthy relationship. You know, it is not unusual to go to arbitration to resolve tax issues, we do it in other countries, and actually the fact that we are in Mongolia is a sign of a healthy relationship where both parties have agreed that actually we need a third party to be involved to help us understand the contracts that we signed.

And I'm okay, that's fine with me. The good thing about it is that if we resolve the root causes of the misunderstanding in the agreements, which I think is a very good thing for the medium term.

In terms of the other part of your question, which was on the negotiations, a lot of progress has been made in the past 6 months about getting the government to publish a conclusion for the Parliamentary Working group, remembering we talked about it last time. That was a big unknown. It has delivered more certainty and it has opened some questions as well.

We are currently working with the government to be able to start negotiating. The government is putting its negotiation team together. I think it is fair to say that the coronavirus and the big challenges the government has been facing and managing in the country has made the progress a bit slower compared to what we would have anticipated earlier on, but we are progressing with this.

I would say in terms of negotiations, the critical issue to start with is to progress power. As I said before, we have got the different options. That is also good progress and it is important that we progress with the government whilst choosing a solution that we can all support.

**J-S JACQUES:**

Thank you Arnaud. A lazy balance sheet?

**JAKOB STAUSHOLM:**

No, we don't have a lazy balance sheet.

We are very proud of how we have de-levered over the last few years, but that's really because our business is so cash generative. We don't have a net debt target and therefore further deleveraging is fine for us, but obviously it has no value if you are not prepared to use your balance sheet.

I explained about our strict capital allocation but actually think about this year we are believing in the future despite short-term uncertainty, we are ramping up investments, and we are indicating that we will invest \$1.5 billion more this year than last year and also our exploration and evaluation costs are at a very high level and we feel comfortable about that.

And that's back to the question about lazy; we think that's very valuable. If you look at the history of Rio Tinto, you look at how profitable mining is, it is really profitable, so think about the future as well and therefore whether you kind of optimise your balance sheet that's not the point, you want to have the balance sheet so you can use it at the right time.

So no debt targets and comfortable if we further deleverage a bit but right now at least we have good investment plans in place.

**J-S JACQUES:**

We have always been conservative from a balance sheet standpoint because we are in a really capital intensive business, making investments not for 10 years but 20 years, 40 years, 50 years and therefore the best insurance policy we have is to make sure you have a strong balance sheet.

I think being where we are and having this conversation today involving uncertainty, we have around the Coronavirus, I think it is much better with the balance sheet we have than some of my peers may have, but I wouldn't say anything much more than that.

Do you have any other questions from the call and then we will come back here?

**QUESTION:**

I just had a question on your portside trading that you've mentioned in your production statement as something you are planning to ramp up. You obviously guide on shipments for the Pilbara business so I was just curious what's the ambition over the next few years to grow that business? So typically we'll see that there will be some working capital build, so how much should we deduct for sales for this year and maybe over the next couple of years just to get a sense of that business's scale? Thanks.

**SIMON TROTT:**

Thanks for the question. At the end of last year we reported both sales but also shipments, so you can see that 1.3 Mt difference between those numbers, really a bit of an indication of where we up to last year.

The portside initiative was really around making sure that we are reaching customers who may not actually be customers today and thinking about our logistics chain in a different way. And thirdly, it just allows us to bring different products to market.

So at Capital Markets there we talked a little bit about the blend we were doing between IOC and our SP10 product, which we have been continuing, and which we have now got out to mills, so that's certainly an area that we'll continue to look at.

The shape it takes in the future, we will have to determine based on value considerations and it's certainly something that customers are appreciating. I think the current backdrop in China also just underpins the quality of customer relationships, having the right products, but we have got to continue to innovate and we have got to continue to think about how we position our portfolio as we go forward.

So they are some of the things we are thinking about, clearly ultimately they are mainly about customer needs and about value, and that's how we'll manage the business.

**QUESTION:**

Can I just ask a second question please? Just on Elysis, I am curious just on the technology itself. We have heard some commentary from some of your aluminium peers that the carbon-free technology is much more energy intensive, so I am just sort of curious if that's the case with this technology and also what spare hydro capacity you have within the Quebec business to actually employ that technology?

**J-S JACQUES:**

Alf, do you want to take this one, although we just have to be slightly careful because the technology is protected, but can you give some indication here?

**ALF BARRIOS:**

The technology is protected so I really can't comment a lot on the Elysis technology unfortunately. But what I might say is that the work is progressing in earnest. We have announced this year the construction of the R&D facility, the investment is about C\$55 million which will be completed by the second half of this year and we will employ about 25 technical experts so we are moving ahead with the technology with the aim of being able to commercialise it by 2024.

Also another I think big milestone that happened this year is that Apple purchased the first commercial batch of aluminium made with this Elysis carbon-free smelting technology.

So we are moving ahead, we are moving at a rapid speed with the objective of having the target commercialised by 2024. But I can't really comment a lot on the technical aspects of the technology.

Regarding your second question about the hydro power at the moment. We are balanced on hydro power in Quebec. We do buy and sell power from Hydro Quebec depending on the hydrology every year. We are balanced at this moment in time in terms of power. But you have to take in account that any retrofit or new build is most likely better in terms of power efficiency to what the power efficiency is now, that the technology will be more advanced.

**J-S JACQUES:**

One more question from the call.

**QUESTION:**

Two very quick ones then.

Just with the pro-forma net debt now less than \$5 billion versus \$8 billion 12 months ago, just the absence of the on-market buy-back extension, is that a balance sheet issue or is

it more Chinalco, and if it's the latter does that mean that's the end of buy-backs for the Company?

Then the second question just quickly on Koodaideri Phase 2, which you brought up and flagged 27 Mt, maybe Chris could just put that into context? Is that envisaged in the mine plan to be replacement or incremental to the 360 and therefore you may have a lot more flex in the business once that comes on? Thanks.

**J-S JACQUES:**

Okay. Chris, do you want to pick up Koodaideri and then I will ask Jakob to pick up the other one?

**CHRIS SALISBURY**

Thanks for the question. Look, Koodaideri First Phase is 43 Mt and we are studying options which could take Koodaideri Phase 1 and 2 up to 70 Mt, and within that we also have a number of quality options to choose.

The other thing is of course our value over volume optimisations, so we will always look to optimise the right capital operating cost/quality option that creates value for customers and for ourselves.

The short answer is we could use Koodaideri either as a growth option if there is potential or also look to optimise the complete portfolio of mines by potentially growing Koodaideri and not replacing somewhere else. So that's a continuous optimisation and we are looking at all of the options.

**J-S JACQUES:**

Thank you Chris. Jakob

**JAKOB STAUSHOLM:**

Thank you for the question. Let me just take a step back and remind you that today the Board announced actually a record dividend, the ordinary dividend has never been higher, and we end up with a total payout ratio of 70 per cent, so the deleveraging is not from not paying dividends the deleveraging is from having a very, very strong cash generation last year.

We have the freedom to use all instruments. We have done share buy-backs last year; we have actually even done it this year, here in January and February we have bought back shares. Today's announcement is entirely about a record high ordinary dividend.

Look, it is the discretion of us, the Board, every half year to look at what instrument is the right thing. I cannot comment on any discussions that might be between two other



parties, our biggest shareholder and our biggest host government. That is what I have to say. But we have freedom and we are distributing a lot to shareholders.

**J-S JACQUES:**

Thank you Jakob. I understand we have time for one last question from the call.

**QUESTION:**

The first question is just about slide 32 which talks about 200 opportunities that have been reviewed since the first quarter of 2017, so I think that's one every five days or something like that. J-S, I am just wondering what your vision for the Company is in 2030 to align with the emissions target? There is obviously an M&A agenda there.

You mentioned gold might be something that the Company would be prepared to retain in the portfolio, but around those opportunities what are the commodities that perhaps Rio Tinto is not producing today that may have been assessed or could you give us some 'colour' about sort of what that includes? Thanks.

**BOLD BAATAR:**

Look, we have been busy. I think first and foremost our attention has been on lithium. We have to understand the hard rock and the brine, we have to understand the low cost position.

We are in the fortunate position to have lithium in our portfolio not just in Serbia but as a by-product of Boron so understanding the customers' supply dynamics as well as the cost position, as well as the chemical composition of what the customers will buy, and what needs to be battery grade is essential. So we have done a lot of work on lithium.

The other one is, of course we are primarily focused on battery grade materials and so we have been spending a bit of time together with copper, around looking at the copper acquisition opportunities. And then secondly we are spending a lot of time on the scanning of high purity nickel and what those price dynamics are, and that's primarily the focus.

As far as the other minerals, they are more tertiary in nature and at the end of the day I would say everything has to create value and it has to meet our IRR thresholds and depending on the jurisdiction it actually has to be very attractive in order for us to make a decision on that.

**J-S JACQUES:**

Thank you Bold. You know that's a very good question. I can't tell you exactly what the portfolio will look like in 2030. I know for a fact there will be really high quality Iron Ore. I know for a fact there will be high quality copper, high quality aluminium, that is for sure.

We look at those opportunities mainly in the battery space, but without saying too much and as that is not typically Rio Tinto if we could have PGMs in the portfolio not from South Africa that could be very good as well, and we are looking at exploration in that space.

But are we going to have oil and gas or are we going to have thermal coal in the portfolio? I think I am pretty confident in saying “no”, and that’s what it’s all about. So I can’t tell you what the breakdown is going to be because what is very important is that we are not allocating - that’s back to the disciplined capital allocation - we are not allocating capital by commodity.

At the end of the day if you step back, the portfolio and strategy of the portfolio is an asset portfolio. We want to invest, to allocate the money towards the best asset and best project no matter which commodity they are as long as they sit nicely in this climate carbon free world. That is what it’s all about, climate change friendly.

So are we ready to invest? The answer is “yes”. Are we investing? The answer is “yes”. But at the same time – I can’t make it clearer – today when we look at the opportunities, the first port of call for us to grow will be around organic growth.

M&A is a watching brief. We are looking at stuff but we will not transact if it doesn’t create value. I can’t make it clearer. At the end of the day what we want is Rio Tinto to be regarded as a good investment on the back of the quality of our returns, the disciplined allocation, the profitability, and not growth for the sake of it, or carbon emission for the sake of it. We can’t make it clearer. I know that doesn’t excite lots of bankers and journalists and so on and so forth, but that’s what it is all about and I think the last four years is a good example of it. You don’t have many companies who have delivered \$36bn of cash returns to their shareholders, it is actually as simple as that.

When I look forward and you look at the question of assets, the quality of the pipeline we have in terms of exploration, when I look at the quality of our products, the quality of our relationships with our customers, and the balance sheet, I am pretty confident that we will continue to deliver superior value for our shareholders in the short, medium and long-term.

On this note, thank you very much.

(End of Q&As Session)