

# **AMG Advanced Metallurgical Group N.V. (AMVMF) CEO Heinz Schimmelbusch on Q1 2022 Results - Earnings Call Transcript**

May 07, 2022 12:11 PM ET [AMG Advanced Metallurgical Group N.V. \(AMVMF\)](#)

AMG Advanced Metallurgical Group N.V. ([OTCPK:AMVMF](#)) Q1 2022 Earnings Conference Call May 4, 2022 1:00 PM ET

## **Company Participants**

Michele Fischer - Vice President of Investor Relations

Heinz Schimmelbusch - Chairman & Chief Executive Officer

Jackson Dunckel - Chief Financial Officer

Eric Jackson - Chief Operating Officer

## **Conference Call Participants**

Alan Spence - Jefferies

Stijn Demeester - ING

Krishan Agarwal - Citigroup.

Martijn den Drijver - ABN AMRO

## **Operator**

Good day, and welcome to AMG's Q1 2022 earnings conference call. Today's conference is being recorded. At this time I would like to turn the conference over to Ms. Michele Fischer, Vice President of Investor Relations. Please go ahead.

## **Michele Fischer**

Welcome to AMG's first quarter 2022 earnings call. Joining me on this call are Dr. Heinz Schimmelbusch, the Chairman of the Management Board and Chief Executive Officer; Mr. Jackson Dunckel, the Chief Financial Officer; and Mr. Eric Jackson, the Chief Operating Officer.

AMG's first quarter 2022 earnings press release issued earlier today is on AMG's website. Today's call will begin with a review of the first quarter 2022 business highlights by Dr. Schimmelbusch. Mr. Dunckel will comment on AMG's financial results and Mr. Jackson will discuss operations. At the completion of Mr. Jackson's remarks, Dr. Schimmelbusch will comment on strategy and outlook. We will then open the call to take your questions.

Before I pass the call to Dr. Schimmelbusch, I would like to comment on forward-looking statements. This conference call could contain forward-looking statements about AMG Advanced Metallurgical Group. Forward-looking statements are not historical facts but may include statements concerning AMG's plans, expectations, future revenues or performance, financing needs, plans and intentions relating to acquisitions, AMG's competitive strengths and weaknesses, reserves, financial position and future operations and development, AMG's business strategy and the trends AMG anticipates in the industries and the political and legal environment in which it operates and other similar or different information that is not historical information.

When used in this conference call, the words expect, believes, anticipate, plan, may, will, should and similar expressions and the negatives thereof are intended to identify forward-looking statements. By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and risks exist that any predictions, forecasts or similar projections contained by such forward-looking statements will not be achieved.

These forward-looking statements speak only as of the date of this conference call. AMG expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements herein to reflect any change in AMG's expectations with regard thereto or any change in events, conditions or circumstances on which any forward-looking statement is based.

I would now pass the floor to Dr. Schimmelbusch, AMG's Chairman of the Management Board and Chief Executive Officer.

### **Heinz Schimmelbusch**

Thank you, Michele. With regards to COVID, we continue to apply all safety measures at our disposal with the highest degree of attention to ensure our employees are working in the lowest risk environment possible. Fortunately AMG has not experienced a facility closure or operational interruption. Nothing is more important to AMG than the safety, health and well-being of our workers and their families. All injuries and occupational illnesses are preventable. And we firmly believe there's no job worth doing in an unsafe manner.

Safety is understood across business units as our number one priority. AMG continued to sequentially improve EBITDA in the first quarter for the 7th time as prices increased and demand remains robust throughout our portfolio. We expect this to continue throughout the year. Our Clean Energy Materials segment continues to deliver strong EBITDA, which more than tripled since the first quarter of 2021, the 8th straight quarter of sequentially increasing EBITDA, the global lithium market has experienced very strong price increases.

Ferrovandium prices have recovered to a level above long-term averages. We have increased EBITDA guidance for 2022, twice since our initial guidance and in the outlook section of our press release issued today, we did so again. AMG's key strategic prospects are all proceeding as planned. The commissioning of the ferrovandium plant in Zanesville, Ohio, which will essentially double our recycling capacity for refinery residues is proceeding well and is expected to be producing at run rate capacity in the fourth quarter of 2022.

Shell and AMG Recycling BV continues to pursue refinery residue opportunities globally to convert refinery waste streams into valuable products including battery materials that will

enable acceleration of sustainable energy transition goals. AMG Brazil is expanding its lithium concentrate production by 40,000 tons, bringing its production capacity to 130,000 tons per annum. The groundbreaking for our new lithium hydroxide production facility in Germany will take place on May 11, 2022, AMG's first lithium vanadium battery called LIVA for industrial power management applications has begun commissioning.

I would like now to pass the floor to Jackson Dunckel, AMG's Chief Financial Officer. Jackson?

### **Jackson Dunckel**

Thank you, Heinz. I'll be referring to the first quarter 2022 investor presentation posted today on our website. Starting on Page 3. This shows an overview of the financial highlights of the quarter. Revenue for the quarter increased by 53% to \$404 million. This increase was mainly driven by the improving price environment, which led to higher sales prices across all three of our segments, particularly in AMG Clean Energy Materials.

Q1 2022 EBITDA was \$55 million, a 93% increase versus prior year. As you can see in the lower left corner, AMG continues to sequentially increase EBITDA each quarter which we have done since Q2 2020. Net income to shareholders for the first quarter of 2022 was \$29 million compared to \$5 million in Q1 2021.

Now I'll turn to a review of our three segments. Let's start with AMG Clean Energy Materials, which is shown on Page 4 of our presentation. On the top left, you can see that Q1 2022 revenues more than doubled versus Q1 2021. This increase was driven mainly by higher prices in vanadium, tantalum and lithium concentrates and higher volumes of lithium concentrate. Gross profit before non-recurring items more than tripled compared to Q1 2021, mostly due to the improved price environment.

Q1 2022 EBITDA increased 3.6 times versus the same period in 2021, due to the improved gross profit resulting in Clean Energy Materials eight straight sequential quarterly increase since Q2 2020. Clean Energy Materials is the segment, which is and will continue receiving the most capital investment within AMG and the capital expenditures shown on the bottom left of \$48 million mainly reflect our investment into the Zanesville vanadium facility as well as our lithium hydroxide plant in Bitterfeld, Germany.

Turning now to Page 5 of our presentation, which shows our AMG Critical Minerals segment. AMG Critical Minerals revenue increased 47% to \$107 million driven by strong sales volumes of antimony and graphite, as well as higher sales prices across all three businesses. Gross profit before non-recurring items of \$13 million was in line with Q1 2021. The higher revenue due to the improved pricing and higher sales volumes were offset by increased raw material prices as well as the ongoing rise in energy and shipping costs during the quarter. EBITDA during the quarter was \$1.1 million lower than Q1 2021, due to higher SG&A costs.

Moving on to AMG Critical Materials Technologies on Page 6. Starting on the top left, you can see that Q1 2022 revenue increased by 27% versus Q1 2021. This increase was due to higher sales volumes of titanium alloys and higher sales prices of titanium alloys and chrome metal, partially offset by timing delays in engineering projects. As a result, Q1 2022 gross profit before non-recurring items increased by 13% to \$23 million.

AMG Critical Materials Technologies Q1 EBITDA was \$9.7 million, compared to \$9 million in Q1 last year. The increase was primarily due to higher profitability in chrome metal and titanium alloys offset by lower profitability in AMG Engineering. The company signed \$61 million in new orders during the first quarter of 2022, driven by strong orders of remelting and heat treatment furnaces, representing a 1.09 times book-to-bill ratio. Order backlog was \$183 million as of March 31, in line with \$188 million as of December 31, 2021.

Turning now to Page 7 of the presentation. On the top left, you can see that AMG's Q1 2022 SG&A expenses were \$37.5 million versus \$33.1 million in Q1 2021. This variance was driven by -- largely by an increase in professional fees, due to higher strategic project costs and higher share-based and variable compensation expense. The first quarter of 2021 personnel costs was reduced by cost reduction efforts in response to the onset of the pandemic.

AMG's Q1 2022 net finance costs were \$8.9 million, compared to \$8.7 million in Q1 2021. This slight increase was largely driven by higher borrowing rates during the quarter, which were partially offset by lower foreign exchange losses compared to Q1 2021.

AMG recorded an income tax benefit of \$1.5 million in Q1 2022, compared to a \$0.9 million benefit in Q1 2021. This variance was mainly driven by improved financial performance, which was more than offset by movements in the Brazilian real versus the U.S. dollar. The effects of the Brazilian real caused a \$14.7 million non-cash deferred tax benefit in Q1 2022. Movements in the Brazilian real exchange rate impact the valuation of the company's net deferred tax positions related to our operations in Brazil. AMG paid taxes of \$3.9 million in Q1 2022, compared to \$2 million in Q1 2021.

Turning to Page 8 of the presentation. You can see on the top left that cash used in operating activities was \$3.7 million in Q1 2022, compared to \$20 million inflow of cash from operating activities in Q1 2021. This decrease in operating cash flow was due to higher working capital, mainly driven by our increased revenues. AMG's return on capital improved for Q1 and it was 19.8% more than double the 9.4% achieved in the same period in 2021, due to significantly higher profitability in the current period.

AMG ended the quarter with \$347 million of net debt with the increase versus year-end due to higher working capital and significant investment in growth initiatives during the quarter. As of March 31, 2022, AMG had \$308 million of unrestricted cash and total liquidity of \$478 million. In January of 2022, AMG Engineering entered into €140 million of long-term bilateral unsecured performance-based guaranteed facility agreements. These guarantee arrangements supported expected customer advance payments and replaced the existing guarantee arrangements.

Given the rising interest rate environment, we thought it would be useful to mention that in conjunction with our refinancing in December 2021, AMG entered into a five-year swap agreement through 2026, which fixed interest rates for the entire term loan at the then prevailing low interest rates in November 2021, because of the swap, all of AMG's interest payments are fixed.

That concludes my remarks. Eric?

**Eric Jackson**

Thank you, Jackson. Demand and prices for our products are fundamentally strong driven by their criticality in the global transition to a lower carbon economy. Global logistics and energy costs especially in Europe are challenging. However, our hedging programs, contract terms and end market price increases are to a significant extent covering these additional costs.

We continue to focus on safety, operational improvement, risk management and delivering our strategic investments on time and on budget, with the overriding operational and commercial objective to be the lowest cost producer and sell at indexed market prices. Our spodumene production in Brazil continues to operate at full capacity and our cost of production is at or below our initial estimates at the time of our investment decision.

Lithium prices increased significantly in the first quarter and as we have stated, our spodumene production is fully sold at market index prices with a three to four-month revenue recognition time lag due to contract and delivery terms. We're working to expedite the expansion of our capacity from 90,000 tons to 130,000 tons with construction scheduled to start in Q3.

Our spent catalyst processing business is performing very well and is the global environmental leader in this space. Global ferrovanadium prices increased in the first quarter to just above long-term averages and the North American price premium widened to reflect the increased cost of importing vanadium pentoxide and ferrovanadium into the United States.

Our Zanesville facility is progressing as planned. The roster is nearing the end of commissioning and the melt shop is scheduled to start commissioning in Q3. The impact of the coronavirus was the most significantly felt in the end markets for AMG Critical Materials Technologies. However, the aerospace market is improving.

AMG Engineering's diversified portfolio enabled the business unit to sign \$61 million in new orders in the quarter as Jackson said 1.09 times book-to-bill. The chrome metal and titanium aluminide businesses are starting to benefit from improvements in aerospace. And in the case of chrome its diversified end market position. High purity chrome metal prices have increased in the past few months and demand is strong, especially in the US market.

Our titanium aluminide production is gearing up to a 100% capacity utilization for Q2 and we are in the process of increasing that capacity by 50% for 2023. The three business units in AMG Critical Minerals continued to operate at full capacity.

However, spiking energy prices had an adverse impact on our first quarter results. AMG experienced significant increases in gas and electricity costs in the quarter with energy costs being about \$12 million higher in Q1 2022 than in Q1 2021. The majority of the increase was at our silicon business in Germany.

However, the increased costs were substantially offset by our power hedging program and increased silicon prices. Our other businesses benefited from long-term fixed price electricity contracts. All of our business units continue to operate with the highest priority on safety and without interruption of COVID and consistently have delivered safety performance far superior to our relevant peer group.

I would now like to pass the floor to Dr. Heinz Schimmelbusch AMG's Chief Executive Officer.

## **Heinz Schimmelbusch**

Thank you, Eric. Before our guidance statements, we would like to update you on strategic considerations regarding our lithium business. As indicated at our lithium Capital Markets Day on January 11, 2022, we have been analyzing our three strategic alternatives maintain 100% ownership finance costs with current funding and operating cash flow.

Second, invite complementary strategic partners for a significant majority stake. And three, IPO. The valuation analysis regarding these three options was done by leading financial institutions in both Europe and the US and it was a very in-depth analysis. We learned that the value of our lithium business on a self-standing basis significantly exceeds the enterprise value of AMG.

In the meantime, however, the equity markets have effectively closed for IPOs thus reducing the optionality by removing one of our alternatives. Therefore, the Management Board has decided to postpone decisions on this fundamental structure of AMG but we will continue to monitor market conditions and we will continue to have an open mind.

Now, let me conclude with our earnings guidance. AMG was able to deliver strong results despite the fallout from the geopolitical turbulence in recent months. EBITDA was \$54.8 million in the first quarter of 2022, 93% higher than the first quarter of 2021 and 20% higher than the fourth quarter of 2021.

As mentioned, it was the seventh straight quarter of sequential improvement and we expect that plan to continue. In December 2021, AMG increased its 2022 EBITDA guidance from \$115 million or more to \$175 million to \$200 million range. In February 2022, we further increased our EBITDA guidance for the full year of 2022 to \$225 million or more.

Given the improved market conditions within our portfolio, especially, the lithium and also the vanadium market the new guidance is that 2022 EBITDA will be in the range of \$260 million to \$290 million. The last long-term EBITDA guidance was given in 2019 prior to the COVID period.

In 2019, we said we will reach an EBITDA of \$350 million or more in five years or earlier. Being now much closer to the year 2023 and despite the global disruption from the coronavirus and the global turbulence, we strongly reaffirm that guidance. As to a new long-term guidance, we will reach an EBITDA of \$500 million or more in five years or earlier.

Operator, we would now like to open the line for questions.

## **Question-and-Answer Session**

### **Operator**

Thank you. [Operator Instructions] We'll go ahead and take our first question from Alan Spence with Jefferies.

### **Alan Spence**

Thanks and good evening everyone. I've got two questions around guidance and I'll take them one at a time. The first one is around 2022 guidance. And if you could just help share a little bit more around the underlying pricing assumptions you're using in your guidance and how those compare to some of the spot prices for your major metals at this point?

### **Heinz Schimmelbusch**

We never do that. But let me say that the prices here are traditionally -- our price assumptions are traditionally conservative.

### **Alan Spence**

Okay, that's fair. And then the second one is on the long-term one. As you move from \$350 million to \$500 million in 2022 through to 2027, is it primarily the strategic investments that you've laid out that is the driver of that increase or is there any different maybe long-term pricing assumptions you've thought about or anything else in that?

### **Heinz Schimmelbusch**

Well, of course, there are significant quantity increases, production levels are rising. There are also businesses innovations in there which become live. And I think that's it. You have massive quantity increases, when you think about lithium that has a distinct effect of vanadium production line. There are, expansion in other businesses and that combined modified by our relatively conservative price assumptions leads very cleanly to the \$500 million.

By the way, we have also certain price reductions vis-à-vis the prices of this year in that five-year scenario. By the way, we -- let me mention that's very important that we mentioned this guidance and I have explained this many times in previous long-term guidance session is the result of a very scrutinizing scenario work. It starts with a bottom-up five-year plan from the units in a very detailed way forward accounting in the full sense forward accounting. And then, it starts in a dialogue and ends with operational meetings of many days with all unit chiefs and financial officers, and then, we run several scenarios which seem plausible and then we select a leading scenario. So that's a very scrutinizing process.

### **Alan Spence**

Okay. That's very helpful. Thank you very much.

### **Operator**

[Operator Instructions] We'll go ahead and take out next question from Stijn Demeester with ING.

### **Stijn Demeester**

Yes. Good afternoon. Thank you for taking my questions. Three if I may and I will also ask them one-by-one. The first one is on the 2022 guidance, and allow me to maybe rephrase Alan's question. What are the main factors that could tilt the results to the low end or the high end of the guidance range? If you could give some color there it would be helpful.

## **Jackson Dunckel**

Those factors are of course mainly pricing.

## **Stijn Demeester**

Understood.

## **Jackson Dunckel**

Particularly, price of spodumene and tangentially price of vanadium. So that generates the range.

## **Stijn Demeester**

But since you're more or less booking probably into Q3 already or you have some visibility already into Q3 prices, given the three to four month lag that would basically mean that it's depending on your assessment of the Q4 price?

## **Heinz Schimmelbusch**

Well, you have our plan for the year, which is the first year of a five-year plan. In that first year plan you have price assumptions which are very accurate more or less although very well visible for Q2 and into Q3, but then you still have remaining portion and that's where we vary certain scenarios and select, as I said, then a scenario which seems to be appropriate. And there is, of course, a discussion about that and there are more passive assumptions and aggressive assumptions and then you have more or less that range.

And that is -- let me explain something please. When you do a model like you obviously do, then you do the model and then you have a range. When we do a planning exercise then we also consider risks and a very detailed risk analysis and the corresponding contingencies. And so, I would add to Jackson's comment that it's price but it's also risk assumptions risk management assumptions what the business will occur and which risks can be mitigated.

## **Stijn Demeester**

That's completely clear. Second question is on the -- maybe on the old to long-term guidance, if I can call it like that. You stated in the press release being now much closer to the year 2023, we strongly reaffirmed the guidance of \$350 million. Does that -- do I -- maybe it's the last question, but do I read correctly that your implicit guidance for 2023 is \$350 million or more?

## **Jackson Dunckel**

Well, that's correct.

## **Heinz Schimmelbusch**

No, no, let me correct that. In order to my English is not that perfect. So you can legitimately imply that.



**Stijn Demeester**

Okay. It's not -- to interpret it that you're sort of rolling forward guidance is \$300 million that you will reach the \$350 million, because your new target is \$500 million. You -- now with visibility on 2023, we will reach the \$350 million or more that we stated in 2019 in that time frame. So, that's the way to read it correctly right?

**Jackson Dunckel**

Yes.

**Stijn Demeester**

Okay. Understood.

**Jackson Dunckel**

It contains coma or more also in there.

**Stijn Demeester**

Okay. And to further elaborate on that prices for spodumene in 2022 are obviously very good. If you then look at next year guidance of \$350 million or more, what gives you the confidence that these prices will hold or are there other factors that sort of will -- could support that in the case that prices for spodumene, because I think that's probably the main moving part here if those prices would decrease.

**Heinz Schimmelbusch**

Well, we -- I have said that 2023 is the second year in our five-year plan. And I say that as regard to your five-year plan, it supports the five-year guidance that we have prices which are lower than the prices in -- somewhat lower in the prices than in 2022. And we are not going to detail whether that's -- what prices are question here. But we have, of course, many prices which are in question here including non-lithium and non-vanadium prices, such as for example, the carbide. So I think that's my comment.

**Stijn Demeester**

Okay, okay. Last question...

**Jackson Dunckel**

Sorry Stijn. It's worth pointing out that Cambridge 2 will start up, you will have aerospace recovery and probably One Plus will start up all in 2023.

**Heinz Schimmelbusch**

Yeah. The quantity effect is dominating for both guidances.

**Jackson Dunckel**

Yes.

**Stijn Demeester**

Okay, understood. Last question before I put myself in the queue is on the vanadium spot price that is given in your presentation that is based on CRU, it's at 33 that is wholly different from the prices that I tracked through Bloomberg. I think that's based on Asian metals, which is currently at 22. Is that the premium that you're currently seeing in the US and potentially driven by yes the PNTR status that was taken away from Russia as a major importer? Is that the premium that we could expect going forward?

**Eric Jackson**

Well, I mean the CRU index is the most relevant index for our business. It's come off just a little bit from the 33, but -- and it includes a premium as I mentioned for the North American business, which 60% of the North American business is supplied by imports. And there's just as you mentioned the most favorite treaty import duty its cost. So we expect the North American price to continue to be at somewhat of a premium to the outside of North America prices.

**Heinz Schimmelbusch**

But, of course, when there is a discrepancy between Europe and the US then the traders go and work and make money on the arbitrage. So it might not have to do anything with these fundamental geopolitical deliveries.

**Stijn Demeester**

Okay, okay. Thank you. These were my questions for now.

**Operator**

All right. We'll go ahead and take our next question from Krishan Agarwal with Citigroup.

**Krishan Agarwal**

Hi. Thanks for taking my questions. I have three and I'll go one by one. On first question on the spodumene pricing as Eric mentioned, there's a time lag of three to four months. So my assumption is that the price of 1,920, which average in Q4 2021 is not fully realized in the Q1, and then the Q2 EBITDA probably will have Q4 and the Q1 pricing, little bit in coming into Q2. And then accordingly there will be a lag for the Q3 pricing as well. So can you confirm that that assumption is reasonable one?

**Eric Jackson**

Yes. I mean, the price lag that we recognize in revenue is three to four months from the index prices. So that's correct.

**Krishan Agarwal**

Okay. And the second thing on the pricing is, are you getting the full pricing, which you are disclosing in your presentation, or are there any leads and lags in the discounts on top of that spot pricing?

**Eric Jackson**

Yeah. I don't think we disclose our specific prices for spodumene, but basically we're selling at market prices.

**Krishan Agarwal**

Okay. So there are no major differences between the market pricing and the prices you realize. Great.

**Eric Jackson**

Not significant.

**Krishan Agarwal**

Yeah, yeah. The second question is on your guidance as for 2023. So \$350 million I'm not saying that okay there's guidance but that's what the market's understanding is going to be. Heinz said, okay, the guidance will be underpinned by Ohio start-up, aerospace recovery and the SP1+ commissioning. So in that context if I were to say that £6 million of additional volume of an AGM next year and then incremental EBITDA from that in the range of \$60 million to \$90 million, would you widely disagree with that?

**Heinz Schimmelbusch**

So you have -- what did you say £6 million? That might be a little on the higher side, what else did you say?

**Krishan Agarwal**

So the capacity is doubling for vanadium right from £6 million to £12 million with the commissioning?

**Heinz Schimmelbusch**

Essentially doubling. So it is not exactly same. What is the other question?

**Krishan Agarwal**

Other question is on that basis of £6 million volume or slightly plus/minus 5%. EBITDA -- full year EBITDA contribution between \$60 million to \$90 million on our assumptions, would you disagree with that?

**Heinz Schimmelbusch**

We don't disclose. We'll see in segmental earnings, sub-segmental earnings. Okay. That's it. We don't.

**Krishan Agarwal**

Okay. But these numbers are in the right ballpark.

**Heinz Schimmelbusch**

Look, I mean, you can ask the question for three times since the -- it's a nice try. We are not having a fourth segment in the making here.

**Krishan Agarwal**

Understand, understand. Trying is in our hand. Okay. My final question is for the five-year guidance of \$500 million, have you included anything on the hydroxide, new capacity setup in that guidance?

**Heinz Schimmelbusch**

Yes, we have, of course, because we start-up with module one. And there is another module in there so a total of two. And we are very confident that this will happen.

**Krishan Agarwal**

Okay. So in that context would you also be able to give some, kind of, indication that how much of the additional CapEx you are expecting to spend for that \$500 million guidance?

**Heinz Schimmelbusch**

It's in the order of magnitude somewhat exceeding \$200 million.

**Krishan Agarwal**

Okay. That's it from my side. Thank you all.

**Operator**

[Operator Instructions] We'll take our next question from Martijn den Drijver with ABN AMRO.

**Martijn den Drijver**

Yes. Good evening or good afternoon, gentlemen. Continuing with the last question on what is included in that long-term guidance. So module one and module two and the total CapEx now is \$200 million or is the \$200 million you mentioned only for Train 2 [ph]? Just wanted to get a better grip on that.

**Jackson Dunckel**

That's for two modules and I said somewhat more than \$200 million for two modules. The first module is very, very accurately calculated. The second model, of course, is in feasibility under whatever assumptions have to go into that. So that's an estimate. So -- but order of magnitude that's it.

**Martijn den Drijver**

And just to be absolutely sure, the \$200 million does not include the basic infrastructure in the laboratory. There's an additional element for that.

**Jackson Dunckel**

The laboratory and that is past investment.

**Martijn den Drijver**

Okay. And just making sure again the Brazilian precursor plant project is not included in the long-term guidance?

**Jackson Dunckel**

No it's not included.

**Martijn den Drijver**

Okay. Thank you. And then moving on..

**Heinz Schimmelbusch**

I want to correct something here. I want to know, what you said. You said laboratory and infrastructure. Infrastructure is included. Laboratory is past.

**Martijn den Drijver**

Okay. Great. Thank you. Now that you're moving ahead with the groundbreaking ceremony. You obviously have a good grip as you mentioned yourself now about the actual capital outlays and probably also then more about production cost per ton. Would you be able to share with us your most recent assessments, even if it is a ballpark on your production cost per ton for the lithium hydroxide plants?

**Heinz Schimmelbusch**

No. Look this is -- the key here we don't go into that but it's also very competitive information.

**Martijn den Drijver**

Okay, I understand. Then there was a remark Mr. Jackson made that on capacity expansions by 50% in 2023. And I apologize, I didn't quite catch that. That was in the chrome and titanium business?

**Jackson Dunckel**

That's the titanium aluminide business in Germany. We're expanding capacity by approximately 50% for 2023.

**Martijn den Drijver**

And what kind of capacity will you have by then?

**Jackson Dunckel**

Yes. I could be as smart you know what and say it could be 50% more than previous but I don't think we give that out.

**Martijn den Drijver**

Okay. And the CapEx is that something that's going to be material or...

**Jackson Dunckel**

It's not a material number and most of it is provided by our engineering business internally.

**Martijn den Drijver**

Okay. Then with regards to that engineering business you mentioned timing delays, which is I guess pretty normal given that's a lumpy business. Is there anything should we expect a catch-up in the next quarter or will that be more in the remainder of 2022?

**Heinz Schimmelbusch**

In the remainder of 2022.

**Martijn den Drijver**

Okay. And then my final question is on the Shell AMG Recycling super plant in the Middle East. If my memory serves me well you said in the -- I think in the last call that an FID could be expected in the first half of 2022. Is that still your expectation or are things still moving very slowly?

**Heinz Schimmelbusch**

There's no change.

**Martijn den Drijver**

No, change. Okay. Thank you very much

**Operator**

We'll go ahead and take our next question again from Stijn Demeester with ING.

**Stijn Demeester**

Yes. Thank you. A follow-up on lithium hydroxide. Since you sort of now firmly included in the long-term guidance is there anything to mention on sort of the commercialization of these volumes? Is that something that is progressing? Is that anything that we could expect news flow in sort of the coming period?

**Jackson Dunckel**

Progressing in a very broad way and the market is very alive in Europe in securing long-term commitments. And the one thing about the lithium market which is certain, is that there is a fundamental scarcity. So if you have lithium marketing is not the -- it's not the bottleneck.

**Stijn Demeester**

Okay. Thank you.

**Operator**

We'll take our next question again from Krishan Agarwal with Citigroup.

**Krishan Agarwal**

Sorry one follow-up question. You mentioned that the energy cost was higher by \$12 million in the quarter. How should we think about the energy cost in Q2? Is it going sequentially higher or the hedging policies, which you mentioned is going to make sure that okay the costs are contained in the Q2?

**Eric Jackson**

It's first a geopolitical loaded question. But assuming no further escalation I think the best assumption you can have is, it's maxed out.

**Krishan Agarwal**

Okay. And are you also able to disclose what proportion of energy requirements are hedged and what proportion is going spot?

**Eric Jackson**

100% and in 2023 a certain portion.

**Krishan Agarwal**

Okay. Thanks a lot.

**Operator**

Well it appears there are no further questions at this time. Ms. Fischer, I would like to turn the conference back to you for any additional or closing remarks.

**Michele Fischer**

Thank you everyone for joining today's earnings call and we hope you're able to join our virtual AGM tomorrow. And thanks again for your questions.

**Operator**

And this concludes today's call. Thank you all for your participation. You may disconnect.