# Dow Inc. | Alliance Bernstein 2022 38th Annual Strategic Decisions |

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Jean Ann Salisbury:

Good morning, I'm Jean Ann Salisbury, natural gas and MLPs analyst at Bernstein. I am honored to be joined by Jim Fitterling, CEO of Dow. And he will make a few comments to start, about the company. And then we'll move over and do Q&A and fireside chat. I have some questions that I'll use to start, but please use the Pigeonhole app that I'm sure you've become very familiar with during your time here to submit your own questions, so that I can see them. Thank you Jim, for being here.

Jim Fitterling:

Thank you, Jean Ann. Good morning, everyone. This year now celebrates our 125th anniversary, a milestone that very few companies achieve. And while I'm very incredibly proud of the value that our company has created since its founding, I'm even more excited about the opportunities for the new company today, as we advance toward our long-term ambition of being the most innovative, customer-centric, inclusive and sustainable material science company in the world. With our diverse global portfolio, the new Dow is well positioned to capitalize on attractive growth opportunities across our fast-growing market verticals of packaging, infrastructure, consumer, and mobility. And as customers increasingly demand more circular and sustainable solutions, our total addressable market is expected to increase from $650 billion today to more than $800 billion by 2025. We have unique competitive advantages that enable us to capture this demand, expand our share and grow our customers, while also delivering resilient performance through the cycle. These include broad global reach with local presence that allow us to support our low cost positions in each region, industry leading feedstock and derivative flexibility, and a consumer-focused portfolio and innovation capabilities that continue to earn us a seat at the design table with our customers and brand owners. These advantages are underpinned by our disciplined approach to managing the business, and focused actions to maximize shareholder value, operating with a best owner mindset, a culture of benchmarking and increased accountability, enhanced transparency, and our discipline and balanced capital allocation.

Jim Fitterling:

As a result of this discipline approach, we have delivered on our financial commitments since our spin. And our recently published benchmarking demonstrates that we continue to deliver top quartile performance across many key financial metrics, including top quartile return on capital, free cash flow yield, shareholder remuneration, and debt reduction. We continued to build on our strong financial performance in the first quarter, achieving sequential and year-over-year growth in both the top and bottom line, as we effectively navigated the dynamic market conditions. And our recently announced $3 billion share repurchase program reflects both the strength of our performance as well as our commitment to disciplined capital allocation, with 65% of our net income going back to our owners across the economic cycle.

Jim Fitterling:

Looking ahead, we also have a clear roadmap to decarbonize and grow the company, adding $3 billion to underlying EBITDA, continuing to deliver industry leading cash flow, and net zero emissions by 2050. In the near term, are in-flight investments are expected to deliver more than 300 million of incremental earnings this year on our path to add more than 2 billion to underlying EBITDA by 2025. These investments span all three of our operating segments and are focused on higher return, lower risk, faster payback projects. For example, in packaging and specialty plastics, we're capturing growing demand for flexible packaging while delivering innovative, carbon efficient process improvements. In industrial intermediates and infrastructure, we're expanding our capacity to focus on higher margin solutions and fast-growing end markets, including mobility, personal care, industrial cleaning and pharmaceuticals. And in performance materials and coatings, we continue to develop innovative solutions for NextGen electronics, mobility and infrastructure applications. We're also advancing our plans to reduce carbon emissions, and expect to deliver an additional 1 billion in EBIDTA as we build the world's first net zero carbon emissions ethylene and derivatives cracker complex in Fort Saskatchewan, Alberta. And at the same time, we continue to make progress in driving circularity, investing in innovative recycling technologies, and advancing partnerships to deliver circular solutions and reduce plastic waste. Ultimately, we will achieve our sustainability targets while maintaining the discipline and balanced approach to capital allocation that has been critical to our success since spin, keeping CapEx within DNA, and targeting a return on invested capital of more than 13% across the economic cycle.

Jim Fitterling:

Near term, as we move through the second quarter, we see continued strength in business investment and consumer spending. For example, US retail sales increased month-over-month in April for the fourth straight month. And we're up more than 8% year-over-year. And industrial production also continues to expand with the index reaching a new high in April. At the same time, we continue to monitor events impacting the operating environment, including geopolitical activity, inflation, COVID, and global supply chains. With resilient consumer and industrial demand, our advantaged speed stock positions and industry leading flexibility, our outlook for the second quarter is unchanged from our guidance in April.

Jim Fitterling:

To close, with Dow's attractive portfolio, unique competitive advantages, disciplined approach, and a clear strategy to decarbonize and grow, Dow remains well positioned to continue delivering top quartile operational and financial performance, elevate our underlying mid-cycle EBITDA above pre-pandemic levels, drive improved returns on capital as we capture fast-growing demand for more sustainable solutions. And with that, Jean Ann, I'll turn over to you and we'll have some Q&A.

Jean Ann Salisbury:

Great. Thanks a lot, Joe. So this is a generalist conference, and I'll start out with some higher level questions about macroeconomic and geopolitical stuff in your outlook. We have already received some questions about some of your business units, so I'll move into those afterwards. But if we could just start with our full-year 2022 expectations for your guidance and risks to the guidance.

Jim Fitterling:

Yeah, I think as we sit here, we still expect global GDP to be in the 3% to 3.5% range, even with the discussions about China having slowed some because of the zero COVID lockdowns. It's nice to see that opening back up. Our experience in China was that we've been able to actually operate through those.

We didn't run at 100% of capacity in Zhangjiagang, but we were well above 50% during that timeframe. So I think that as China comes back, I think you'll see a little bit of the phenomenon that you saw here. After 2020 and 2021, you saw the demand pick back up. I think you'll see the demand there pick back up. It's been pretty slow in the second quarter. And I think you'll see some snap back as things start to return. And hopefully, that'll take some pressure off the supply chains. We have been seeing improvement. It's been uneven, but we have been seeing improvement in the supply chain, our ability to ship out of the US. We're back to kind of March, 2020 levels, which is, I think, a good sign. At that time, about 2 billion pounds was going out of the US. So that was about 40% of US [industry] domestic production. Today, we're sitting at about 35% of US domestic production going out. That's a big improvement over where [the industry was] in 2020, and then coming back in 2021. So it hasn't been steady every month, but over time, you can see it gradually improving. So we've got a little gap to close to get back to that 40% number, but I think we're getting there. Europe's going to see obviously higher cost pressures because of the Russia-Ukraine situation. And I don't think that will change structurally until we're able to help Europe with some additional LNG so that they can basically get themselves off of the Russian gas situation.

Jean Ann Salisbury:

Great. How is your team mitigating the impact of feedstock dynamics and elevated oil, natural gas and ethane prices? Does the prospect of longer term higher domestic natural gas prices change any of your strategic priorities or the businesses you want to be involved in?

Jim Fitterling:

Well, even though US natural gas prices are higher, the spread between oil and natural gas, for what we produce is still very, very healthy. In the oil markets, I don't think you're going to see supply catch up to demand anytime soon. So I think we're going to see this $100 to $130 a barrel type trading range, at least through this year, and at least into middle of next year. It will take that long for the demand to catch up. For the last three years, there's been under-investment in oil production, so we're lagging today already. And oil demand continues to increase, both here and in Europe. And I think we'll see that come back in China as well. So that's going to even tighten it up even more. So oil's, I think, there.

Jim Fitterling:

Natural gas, we have to watch what's in inventory as we go into wintertime. That usually is a determinant of what next year's price is going to be. Right now, we're kind of the $6 to $10 a million BTU range. I think will probably be $5 to $7 a million BTU. There's plenty of ethane available for feedstocks. And of course, this is where flexibility comes in. Now, 85% of our cost position is light cracking, natural gas liquids. So with these oil price dynamics and our flexibility and cost position, we're well positioned to see through it. Long term, I think the production is going to come. Right now, we need also to get some more LNG facilities permitted to be able to help the European Union get an additional source of supply of US-exported LNG. That's really what will help them long term structurally improve their energy cost position.

Jean Ann Salisbury:

Totally agree. It's all I talk about all day, every day. Great. Looking beyond the near term, how do you see demand evolving across end markets, and what is your overall outlook for key chains, so polyethylene, isocyanates, and silicones for the next several years?

Jim Fitterling:

Yeah. Polyethylene is still growing at 1.3 to 1.5 times GDP. Just recently here, our domestic consumption just last month was about 7%, 8% higher than it was a year ago. So even domestically, we've seen a big tick up in demand for plastics. I think in all the applications that we sell into, whether it's packaging, mobility ... packaging, it's the lightest weight solution. It's the lowest carbon solution. It's fully recyclable. Whether it is or is not recycled today, I think it's the big question. But it is fully recyclable. And so that is driving the demand for the product.

Jim Fitterling:

And mobility, same issues in an electric vehicle as you have in an internal combustion engine vehicle. You need lightweight. That typically means composites and plastics to help reduce the weight of the vehicle. So that bodes well. Additionally, as cars become more electronic, that drives demand for silicones. There are two to three times the volume of silicones in an EV than there are in internal combustion engine vehicle. And a lot of that is because all the electronics have to be encapsulated. And what the silicones do in that encapsulation is help produce a lot of crosstalk between the components.

Jim Fitterling:

... opponents. That's necessary when you get into autonomous vehicles and you want to get into that kind of driving. We also see infrastructure driving demand. So you need 5G infrastructure to support this kind of a capability. Dow is the world's leader in jacketing for cabling and so if you look at jacketing and also shielding that goes into the cabling, whether that's high speed transmission lines for electricity, medium voltage, or into 5G connectivity for wireless towers, all of that demand is going to pull that. And we have investments coming in our high purity products to be able to deliver that demand. We see strong growth in consumer. Consumer is back after having been a little bit, I would say health and beauty consumer personal care is back after having been down during COVID. So we see rates in that business right now, more like one and a half to two times GDP.

Jim Fitterling:

Commercial buildings pulls a lot of capacity for us in terms of glass glazing and ceiling. We're the world's leader in silicone caulking and now we have a complete carbon neutral line of silicone glass glazing. So any skyscraper that you see here, any large commercial building, any large multi-unit residential building, we use quite a bit of content for our silicones business. So I see all of those continuing to increase, and I think circularity adds another layer on top of it. We today see many of our brand owners, about 400 brand owners have set a 30% post-consumer recycle content target for their plastic packaging. That drives a huge amount of demand and right now the supply can't keep up with it. So we're seeing premiums of about $1,500 a ton for that post-consumer recycle material. And so as these investments come on for advanced recycling, more mechanical recycling to meet that demand so that the brand owners can make their claims to their consumers who are demanding that change, I think we're going to see that that is a very positive return on investment, and it's going to drive another layer of growth in that business.

Jean Ann Salisbury:

Great. So moving over to macro and geopolitical, can you kind talk about the Ukraine, Russia conflict impact on your business? How large is the risk that Russia cuts off the gas and how are you mitigating that risk?

Jim Fitterling:

Yeah, I don't know how likely the risk is that they cut off the gas. There's a lot of activity, obviously in Europe looking at what can happen to help give Europe another source of LNG. That activity actually started well before this situation. We just announced a project in Stade in Germany. Stade is one of our largest sites in Europe. It's about 30 minutes upstream the Elbe river from Hamburg. And we had worked with a consortium for a number of years to look at citing an LNG import facility there. It hadn't come to fruition, but recently we came in and reactivated it. And so we're hopeful that long term, it would be a full established LNG import facility. In the near term, maybe a floating platform to give them some immediate relief. It should be able to bring in about 15% of Germany's natural gas needs and there's a discussion of about potentially four or five of those types of facilities in Germany that would help quite a bit. I think that would go a long way towards breaking that.

Jean Ann Salisbury:

Absolutely.

Jim Fitterling:

I do think Russia is big in the chemicals industry as well. It wasn't a big market for us, but it is a big petrochemicals producer and supplier. So as it is out of the market due to a lot of the sanctions and things that are happening, it's creating a ripple effect through things that we have to keep an eye on. And so far we've been able to mitigate our precious metals. So both Russia and Ukraine produce precious metals. In some cases, those get used in catalysts in our business. And typically the catalyst business is a rental business. We buy the precious metals and then when we recover them off the catalyst, we get paid back for them. So I think we can mitigate that. I think where the marketplace is going to see the bigger, longer term impact and the one that'll be tougher is on fertilizer and food.

Jim Fitterling:

Ukraine was such a food supply to Northern Africa, middle East and Europe that you've taken out a large chunk of food production. You also have to look at potash and fertilizer. And so what that's going to mean is that the rest of the global producers are really going to amp up to be able to supply that. And without the Ukraine in the Ag market this season, and that can potentially go into next year as well, you've got to make up that demand. So I think advantage US farmers with GMO production and efficient, advantage Brazilian farmers, they're going to benefit from this. And Europe is going to see that kind of inflation probably more than the US on the food side.

Jean Ann Salisbury:

Makes sense. General inflation impacts on your business and ways that you could mitigate it?

Jim Fitterling:

No different than what anybody else is experiencing. So if it's in fuel for utilities and that kind of thing, greater than 20% increases every day, inflation probably in the five to 8% range type of inflation. We're a producer of most of our own energy. We've done a lot with alternative energy. So wind and solar is now about 900 megawatts of capacity for us. So that helps a little bit, takes a little bit of pressure off the natural gas prices. Most of the inflation has passed through the chain so it's going out to the consumer and that's the part that we watch is, how long can these prices stay at this level and at what point does demand get destroyed? So far demand has been good, the consumer has been strong, and I think that will continue. And I think we're starting to see in some commodities like wood, some big commodities, you start to see prices come off a bit and moderate a bit. And so if we can get through a winter here with a Russian situation, then I hope we got a good chance at landing this without demand destruction.

Jean Ann Salisbury:

Makes sense. You referenced this a little bit at the beginning but what are you seeing on the ground in terms of China demand due to the COVID zero policy? I know you'd said that you were expecting that to come out in the next year or two.

Jim Fitterling:

Yeah. Logistically it's been hard to move product around. We had demand if we ran more than 50% during some of the zero COVID lockdowns to keep customers going. And we have a very dedicated staff in China. Actually, the staff stayed at the site and lived and operated the site during that timeframe to keep things moving. So that helped customers out. I think demand is going to pick up pretty quickly. I'd say the biggest challenge has been getting product that was shipped to China in because it needs to be offloaded at the ports. And so the ports have been a little bit slow. So I think as they open up, it'll probably take a quarter for us to start to see some of that clear and then we'll see that roll through toward the end of the year. So I'm optimistic. I think the demand is there in China for the product, but I think things like we experienced here whenever you have a complete government lockdown on operations, and then you start everything up from zero, you kind of have a lot of inconsistencies that you've got to work through.

Jean Ann Salisbury:

Yep. Great, I'll move over here to some of the questions that we've received from the audience about your various business lines. So there are a couple about your view of coming polyethylene prices in the near term that says, the May contract price is still unsettled, but some producers have reduced their nomination. How do you think that will shake out? And then similarly for June polyethylene prices with ethane prices touching multi-year highs, do you see more support in June for price nominations for polyethylene?

Jim Fitterling:

Yeah. In north America, there were $0.7 on the table in May that as you mentioned is unsettled and there's $0.7 on the table in June. So that's still active. In Europe, we saw in April €250 to €300 per ton increase. Obviously oil price has a big factor on that because naphtha cracking is the predominant fuel in Europe. So that is through European producers cash margins are okay. I would say the Asian producers, cash margins right now are underwater. And so that's the one that we're keeping an eye on, how long will they operate it negative cash margins and will the China opening up take some pressure off or will that demand coming back, see prices move up? And I think we're looking at both of those very carefully. Any other businesses, I think prices are stable and healthy. We haven't seen any destruction in any of those prices and the demand is good downstream.

Jean Ann Salisbury:

Great. There actually was another one on here about that topic. As you just said, Asian integrated polyethylene margins have been a negative territory for the last few months. What is driving this and why haven't you seen more people turn off?

Jim Fitterling:

Yeah, I think the wait and see with China. I mean, China is the big demand there. So the wait and see on how long COVID lockdowns are going to take. China pricing was up $0.5 in April, which is positive. And so that helps a little bit, but they're still in pretty negative territory. Polyester demand for MEG, MEG is a big market monoethylene glycol for China has been a little bit slow because of the production there. So I think if that comes back, that'll obviously bring some cash margin into the ethylene chain. So we have to watch all those carefully, but historically they don't run too long at negative margins before they start to turn back.

Jean Ann Salisbury:

Yeah. And then it looks like there's one more on polyethylene. Can you describe your US operating rates for polyethylene? Have you curtailed production in light of lower rail car availability and difficulty exporting product?

Jim Fitterling:

Actually hats off to the rail industry. They've been the best supply chain for our ability to move it. And we have rail car-

Jean Ann Salisbury:

The nicest thing I've heard anyone say about the rail industry and-

Jim Fitterling:

Well, look a lot of our customers take rail quantities. We have the largest rail fleet for polyethylene in the industry. So our ability to get cars and move cars has been good and our own purchasing and supply chain team has contracts with all of our transport carriers and this has helped us kind of navigate through. The other thing I would say is not evident to everybody, but we talk about digitalization being important to the company. We've got digital real time capability to see all of our shipments, every mode of transportation. If you dial back five years ago, I couldn't have said that to you, but today I can say we can see truck, rail, barge, marine pack cargo, everything that goes out of the plant. And what that allows us to do is not necessarily make up for a driver that doesn't show up or a car that doesn't go out, but allows us to see if it's moving to the customer or not, and get out in advance of it and intervene and make sure that we can take care of them so that team's done a good job.

Jim Fitterling:

Rail's been reliable for us and as we continue to grow, we'll continue to have rail capacity come on. But trucking, I think is one that we have to also see some improvements in and we've been working with our partners to get that up. I mentioned the marine pack cargo earlier, our export numbers are up.

Jim Fitterling:

We're just a little bit shy of where we were pre-pandemic in terms of percent of domestic production, that's export, but we're within sight of that distance of that.

Jean Ann Salisbury:

Great. Let's see. Raw material availability issues were a significant constraint on coatings production in 2021 and into 2022, as this improves, are you seeing a step up in demand?

Jim Fitterling:

Demand is good on coatings, whether it's for architectural coatings, for housing and commercial, it's good. During COVID, do it yourself demand for the homeowner paint side was very strong. Last year, the contractor business came back in a big way and the outlook for housing this year because of the amount of construction that's in flight is still very strong. The housing market at any time in the United States is about six to 10 million homes short. And I think that's going to continue. And right now, because of labor and the ability to get a house completed in a certain timeframe that probably means that shortage is there. So that is one of the reasons you see home prices going up. Another reason is rents have gone up so much. So those who are paying exorbitant rents are actually looking at becoming a homeowner and getting it done before interest rates really start to rise.

Jim Fitterling:

So long term, I'm pretty bullish on north American home construction as a business. Commercial is still strong. And so we've seen that, especially in the urban centers, we continue to see good commercial demand and industrial coatings are good as well. So as you get into electric vehicles and you're trying to make them quieter, we have a line of coatings called acoustic grill that goes into sound dampening for those vehicles and noise vibration and harshness is even a more important issue in an electric vehicle because you've got no noise from the engine. It's only tire-road noise. And so we're working on things to make that ride quieter and to make the cabin quieter for that.

Jean Ann Salisbury:

Never thought about that. That makes sense.

Jim Fitterling:

Raw materials are, I would say still a challenge in any given week, one raw material or another could be there. And in a coatings formulation, sometimes you can have up to 30 different ingredients that are in there. So one ingredient's not there, you shift schedule to make something else so that you can keep the capacity going. So those teams are juggling a lot to keep up with the demand, but it has compared to where we were this time last year. Certainly the uptime is much better and much more available. And to the operating rate question in plastics that you asked earlier, we've been operating in the 90 plus range on plastics production. I don't think that's going to change. We've been in that same zone, at least in the Americas and Argentina. Canada, north America, Argentina, all of our advantage cost production, Saudi Arabia, Kuwait have all been in that 90 plus range.

Jean Ann Salisbury:

Great. Has Sadara been impacted by weaker Asian demand, amidst China COVID lockdowns. Are you able to reroute those volumes to somewhere else?

Jim Fitterling:

Sadara has been running well. It's had some turnaround activity in the polyurethanes chain, but that has gone well. And the demand has been good for those products. And Sadara's margins given that it's got a low cost and a fixed cost base in terms of its inputs with a hundred plus dollar barrel oil, it's moved into real positive territory. So it's generating good cash right now.

Jean Ann Salisbury:

Great. And then I think moving over to some capital allocation questions. So looking beyond 2022, do you expect to continue paying down debt after this year's 0.5 to $1 billion debt repayment?

Jim Fitterling:

We don't have any long term debt maturities until the end of 2026. Our five year debt maturities, if you look at the next five year window are about one and a half billion dollars. Howard, the finance team have done a phenomenal job of managing through this low interest rate environment and getting that debt profiled good. When we spun out as a company, our total net debt was just north of $30 billion. We pay down $5 billion of our debt. We've seen a $4 billion reduction in our pension liabilities, and we saw a $2 billion improvement in our Sadara guarantees. So almost $11 billion improvement in our net debt, which is our cost position, our demand, the way we've been managing the business, all led to the Moody’s upgrade that we got this week on credit rating. And I would just say to our investors, we're able now to support that dividend, which we supported right through 2020, and COVID. We are doing more share buyback.

Jim Fitterling:

I mentioned the $3 billion program. So this quarter we will do about 800 million of share buyback that will almost retire the old program that was in place. And then the new $3 billion program starts. So if you look at our total shareholder reward this year, it's going to be probably half our free cash flow going back to shareholders, half of it going back into the business investments, and those investments have allowed us to increase the earnings quarter of the business by about $3 billion. And we're looking to add another three. So we're making good decisions on high return projects. The ones in the near term are quick execution projects, fast payback, they're all higher value than some of the more commodity parts of the business. So we're upgrading the mix. Anytime we can move silicones to a finished product instead of a merchant [inaudible], that's really upgrading the product mix.

Jim Fitterling:

We're doing the same in industrial solutions with purified EO. That's our highest return to ethylene molecule. We're doing the same in plastics in our last benchmarking year. We increased our margin, which was already 400 basis points higher than the competition by another 2 cents a pound. So we continue to move up the mix and people sometimes forget in our plastics portfolio, we also have elastomers and some high value products in there about 25% of that mix, elastomers wiring cable compounds, those types of products. So we continue to enrich that mix as well. So I feel good about our ability to not only grow the business, grow the earnings, grow that cash flow and be able to continue to support the shareholder return. And last year we didn't do as much share buyback. We leaned into two things. We leaned into a voluntary pension payment, which was part of our longer term plan to get this pension liability down. And we leaned into debt reduction, actual paying down of debt.

Jim Fitterling:

We leaned into also getting a few of our projects up and running that allows us to have the strongest balance sheet coming out of COVID, allows us to get that rating agency upgrade. And I think puts us on a really, really good foundation to be able to support our investors 2001, 2008, 2020. Every trough we've had higher earnings. Our mid cycle has gone up in every one of those, but what's different about 2020 and 2001-2 and 2008-9 is in 2001-2 and '8-'9, our leverage ratios were extremely high, four, six percent net debt to EBITDA. And through 2020, we were around two.

Jim Fitterling:

So I think we're in a good position. I think we've shown that we can have that discipline continue to reward the shareholders, make those good investments, increase the quality of the portfolio. And to me with what's happening with sustainability, everybody views this as a threat. I think it's a huge opportunity for our business. We know how to decarbonize. That Canada project is actually going to be as good or better return than the Texas 9 project that we did. And we're in good shape. I feel like we have a steady plan through 2050 to not only decarbonize the portfolio, but grow it. And I think we're going to put this company in the leading space in sustainability.

Jean Ann Salisbury:

Great. And just to follow up on that, it's kind of a boring finance question, but what's your philosophy of returning cash through dividend versus buyback? What's the right dividend?

Jim Fitterling:

You want to be able to support the dividend through the bottom of the cycle? So when we stress test our economics, we run a Monte Carlo simulation, which has proven to be uncannily accurate and it was through 2020. And we look at what our cash flow will be through the bottom of that cycle, because we know investors have a long memory about having had the dividend cut in the bottom of a cycle. So I want to make sure that we can support that dividend in the bottom of the cycle. And then we use shareholder buyback as a fly wheel because we can move that number based on our earnings. And we've looked at the model going forward. We've looked at slowdowns scenario, we've looked at steady state as we are right now, or a scenario where things snap back and we go into peak margins again.

Jim Fitterling:

And at the bottom, in that scenario, we can support our CapEx investments. We can support our dividend. We can still be able to do share buyback. Our debt, as I mentioned, is low. Our leverage ratios are good. We've really protected ourselves from inflation on interest rates because we've locked in most of that through the bond market at rates around 3%. So when you think about the work that we did over the last two years, it really has positioned this company well for the environment that we're heading into. I can't predict any better than anybody else. The uncertainties that are going to happen tomorrow, but I can tell you right now, this is the strongest. The company's been in 125 years and we're just getting stronger.

Jean Ann Salisbury:

Great. Thank you. Can you update us on the expansion projects expected to start up in 2022? There are a few listed here, the FCDh unit, oxalate expansion and silicones.

Jim Fitterling:

Sure. Yeah, we got FCDh starting up this year. It's basically in the finishing stages right now. So I think end of third quarter you'll see it being in the startup mode. You'll probably see it in the fourth quarter producing. Oxalates production is underway, probably a mid-year for that. Each of those, I should say, adds about 75 million a year on a full year run rate EBITDA basis. At the end of last year, we finished an expansion at Fort Saskatchewan on the existing cracker that added another 75 million, which we'll see that full year impact this year. So that's half of the growth. Silicones will add capacity that will come in there and then we'll have more oxalates capacity coming on for consumer brand growth that is already under contract. And so that will come in probably more toward the 2025-6 timeframe. And then you'll see this year for the Canadian project, you will see most of this year is spent on the commercial agreements and getting the final engineering done. So we can take it to the board at the end of this year for the final investment decision. And I would say the CapEx ramp up on that project is going to be... The project will come up in two phases, the new cracker, the first phase of it will be 1050 kilotons per year. And then that will also

Jim Fitterling:

Also have the carbon capture and hydrogen production off the autothermal reformer. And then the second phase will be an additional 600 KT. So if you look at that, it's 2027 for the first phase and 2029 for the second phase. So you would expect about two years before that 2027, like '25, '26, '27 to be the CapEx spend years for that first phase. And then through the second phase and doing it in two phases, kind of smooths out the CapEx spend for us. And we'll try to navigate it within that DNA during that period as well.

Jean Ann Salisbury:

Great. And following on, on that, there's actually a question of where do you expect CapEx to trend in 2023 and beyond, is inflation having any impact on this?

Jim Fitterling:

Our target for this year was $2.2 billion, hard for me to predict where we'll end up this year. We're not going to end up north of that number I would tell you that. And our goal next year was to ramp it up just slightly from that. So probably toward the look at [inaudible] toward the $2.5, $2.6 type number. Depreciation and amortization is $2.9 billion. And most of those increases in CapEx in the near term are on silicones, on oxalates on de- bottlenecking the cracker up in Canada. You'll see some investments in plastics, but you'll see them in all three segments. And I think as those roll off, then you'll see some of the bigger spend on the Canadian project come in.

Jean Ann Salisbury:

Great. So if we can kind of move over to ESG and sustainability, can you please talk to pricing for more sustainability focused innovation and products and how this evolves as products become more of... got cut off, but I'm going to guess your portfolio?

Jim Fitterling:

Yeah. So what's driving pricing right now on, let's take plastics for post-consumer recycle material, is just the lack of available product. So there's a lot of effort going on. In the developed economies, there's a lot of effort going on with waste management companies, as well as recyclers on developing the technologies and creating the pull for better curbside collection. We're part of a group called the Recycling Partnership, which goes at different cities in the United States to try to increase curbside collection, which then becomes a feed stock for what we use. And the alternative is to landfill the material. So they need to find outlets, typically they would take lower quality materials and maybe go into some markets like construction project products. And we want higher quality materials to be able to go back into things like consumer brand, packaging, food, packaging, et cetera.

Jim Fitterling:

And so we're developing that. That's a little bit of heavy lifting right now, but clearly the demand is there and what's different in the past is that the demand from the brand owners is there and the supply is lagging. So we're starting to see a lot of investment move into that space. We're focusing right now on advanced recycling techniques to be able to take those plastics back to a feed stock quality so that we can make a product that's like a virgin plastic so that you don't have taste, odor issues with the final product. With mechanical recycling, you're going to see those go into less stringent type of applications, but on both of them, they're premiums on that product today. We're also seeing a trend towards bio-based materials. So a lot of requests for bio materials and we've got some bio-based alternatives that are coming through as well.

Jim Fitterling:

We've got six of our sites in all of our sites in US and Europe are ISCC certified. And so that we've got the traceability that we need to provide to customers on the supply chain benefits. And so I think it's not going to change. When I talk to the brand owners and we talk to the consumer groups, that's something that consumers feel very strongly about and we have to meet that demand. And I think it's a good thing. So our target is to see a million tons of that kind of material in our finished product by 2025, 2030, and also then to make sure that all of the products that we make can be fully recycled by 2035. We're almost there, we're 85% of what we make today can be fully recycled. We're under some sophisticated, flexible packaging that needs to be re-engineered and redesigned like multi-layer packages that need to be re-engineered to be more homogenous, but we'll get there by that timeframe. So I feel good about that.

Jim Fitterling:

We're also seeing good demand and pull on polyurethanes, for example, we've got a great investment in France, which is for recycle of mattresses. When you think about waste collection, like a used mattress, pillows, et cetera, these are big bulky volume items, and we're working with local producers there so that when you buy a new mattress and they pick up the old mattress, the old mattress goes back to this facility and can get recycled into virgin polyol and back into foam for a mattress or a pillow again. And the uptake in Europe has been very, very strong. So I think polyurethanes is just as advanced in pushing as the plastics business is, to try to close that loop.

Jean Ann Salisbury:

This is perhaps an oil and gas layman's question, but if you believe that we're in a higher oil price environment, structurally, should that help the economics of recycled plastic to come up on its own because it seems like what you're saying is a lot more of the driving force is the brand's desire to have a certain amount of recycled plastic more so maybe than that oil price driving the cost differential.

Jim Fitterling:

Yeah. I think oil price is also driven up some of that premium as well. So that's kind of raised the floor, if we were to get supply up and oil price were to come down, I think you would see products trade relative to their next nearest substitute. And so I think you would see some of that come off, but I think you're going to have to see a real improvement in recycling rates and a real increase in advanced recycling capabilities. Today most of the advanced recycling plants, the scale of them is about 10,000 to 20,000 tons per year. We need to get the scale of those plants up to the hundreds of thousands of tons per year. Then they'll start to have an impact. I think we'll do that in the near term, like over the next two or three years.

Jim Fitterling:

And then at that point, it'll take some pressure off of virgin demands. I think what the consumers want is to see that for every increase in capacity that you're putting on the ground, you're not having to open up new exploration and production to fill that. And to me, the only way you do that, is if I'm going to have to have some virgin material to blend with this recycled material. So I have to start substituting recycled content for virgin content. And so that's what the long term goal is. It still requires a lot of science and work with the brands because the brands are not going to move a product into a package, if the consumer detects a taste or an odor, that isn't going to work on in the marketplace. And so you've got to address all of those consumer needs, and that means you've got to go through qualifications. You've got to know how to blend the product. And that kind of feeds back to what we do for our customers, to make sure that they've got the quality they need to sell their product.

Jean Ann Salisbury:

That's great. When your customers, your brands, are asking for a sustainable product, are they usually talking about wanting some portion of recycled material, which you kind of just spoke to, or do they generally mean wanting renewable feed stock or low carbon feed stock, or both kind of popular for different types of people?

Jim Fitterling:

Both and all. I would say it's not just recycled or renewable, but also carbon footprint. So part of the digitalization is working on the ability to have the traceability and the documentation that we need to provide to a brand owner. You've just seen this week, some greenwashing claims in Europe. And so you also have to be cognizant that the marketplace wants that certification. So when we do the ISCC certification, behind that is we have to have traceability and documentation about the CO2 footprint. Essentially they want to know the whole life cycle analysis of this alternative versus what they were buying before. And then you've got to give them documented proof.

Jim Fitterling:

So there's some additional work that goes into doing this, but you have to build it into your system. And I feel good about where we are. On our scope one and two numbers, their rock solid. On our scope three numbers, we're working on that, but I think they're going to want both. Any material they use, they're going to need to understand the climate impact. So they're going to need to know that CO2 footprint, and then they're going to want to know about the recycling as well.

Jean Ann Salisbury:

Great. And as our last question one more from the audience, which parts of the business do you think are most likely to over deliver in the years ahead? Where are you most excited?

Jim Fitterling:

On the growth side, I think silicones is well positioned as a material. Just the range of the properties of silicones, the temperature range of the use of silicones, the number of applications it goes into and the value it provides, those applications is good. Industrial solutions, purified EO derivatives, oxalates into the either pharma, home and personal care consumer type of products are growing at great rates and they're our best return to ethylene. And I continue to stay packaging, but packaging has to deliver on the promise of circularity and CO2 footprint. And the CO2 footprint in packaging for all of us is essentially the production of ethylene. And we've got a clear path to get that to zero, but I would put them in that order.

Jean Ann Salisbury:

Great. Well, we'll wrap up there and thank you so much for joining us, Jim.

Jim Fitterling:

You're welcome.

Jean Ann Salisbury:

And thank you for joining us as well, everyone. And for asking questions.