

LyondellBasell
Fourth Quarter and Full Year 2023 Earnings Call
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Presenters

David Kinney, Head, Investor Relations
Peter Vanacker, Chief Executive Officer
Michael McMurray, Chief Financial Officer
Ken Lane, EVP, Global Olefins & Polyolefins
Kim Foley, EVP of Intermediates, Derivatives & Refining
Torkel Rhenman, EVP, Advanced Polymer Solutions

Q&A Participants

Stephen Richardson - Evercore ISI
Steve Byrne - Bank of America
Patrick Cunningham - Citi
David Begleiter - Deutsche Bank
Vincent Andrews - Morgan Stanley
Michael Sison - Wells Fargo
Kevin McCarthy - Vertical Research Partners
John Roberts - Mizuho
Mike Leithead - Barclays
John McNulty - BMO Capital Markets
Matthew Blair - Tudor, Pickering, Holt

Operator

Hello, and welcome to the LyondellBasell teleconference. At the request of LyondellBasell, this conference is being recorded for instant replay purposes.

Following today's presentation, we will conduct a question-and-answer session.

I would now like to turn the conference over to Mr. David Kinney, Head of Investor Relations. Sir, you may begin.

David Kinney

Thank you, Operator. Before we begin the discussion, I would like to point out that a slide presentation accompanies today's call and is available on our website at www.lyondellbasell.com/investorrelations.

Today, we will be discussing our business results, while making reference to some forward-looking statements and non-GAAP financial measures. We believe the forward-looking statements are based upon reasonable assumptions, and the alternative measures are useful to investors. Nonetheless, the forward-looking statements are subject to significant risk and uncertainty. We encourage you to learn more about the

factors that could lead our actual results to differ by reviewing the cautionary statements in the presentation slides and our regulatory filings, which are also available on our Investor Relations website.

Comments made on this call will be in regard to our underlying business results using non-GAAP financial measures, such as EBITDA and earnings per share, excluding identified items. Additional documents on our Investor website provide reconciliations of non-GAAP financial measures to GAAP financial measures, together with other disclosures, including the earnings release and our business results discussion.

A recording of this call will be available by telephone beginning at 1:00 p.m. Eastern Time today, until March 2, by calling 877-660-6853 in the United States and 201-612-7415, outside the United States. The access code for both numbers is 13742056.

Joining today's call will be Peter Vanacker, LyondellBasell's Chief Executive Officer; our CFO, Michael McMurray; Ken Lane, our Executive Vice President of Global Olefins and Polyolefins; Kim Foley, our EVP of Intermediates & Derivatives and Refining; and Torkel Rhenman, our EVP of Advanced Polymer Solutions.

During today's call, we will focus on fourth quarter and full year 2023 results, including an update on LYB's strategic progress. We will also discuss current market dynamics and our near-term outlook.

With that being said, I would now like to turn the call over to Peter.

Peter Vanacker

Thank you, Dave, and welcome to all of you. We appreciate you joining us today, as we discuss our fourth quarter and full year 2023 results.

Let's begin as we always do, with our safety results on Slide 3.

During 2023, our employees and contractors demonstrated their commitment to outstanding safety performance. LYB's total recordable injury rate was 0.14, which is approximately 20% lower than the average of the prior three years. I want to congratulate our APS segments where injuries were 38% lower than 2022, a significant improvement from historical levels.

We always use safety performance as a leading indicator of operational excellence and business performance. But there is no greater value than seeing every member of our team return home to their families, every day, in the same health as when they began to work their working day.

Let's now turn to Slide 4 to discuss our financial results. 2023 was another challenging year for petrochemicals. While energy prices moderated in an environment of geopolitical unrest, markets were extremely cautious due to uncertainty about inflation

and the potential for a more pronounced downturn in economic activity. Reported GDP growth in U.S. and China improved relative to 2022, but growth in petrochemicals was far below norms for our industry. Against that backdrop, LYB delivered earnings of \$8.65 per share with an EBITDA of \$5.2 billion.

Cash generation was exceptional and resulted in \$4.9 billion of cash from operations. We have a highly efficient cash conversion ratio of 98%. We ended the year with \$7.6 billion of liquidity supported by a strong investment grade balance sheet. And we exceeded our cost of capital with an 11% return on invested capital.

In March of last year, we successfully launched our new strategy at our Capital Markets Day in New York. Now let's turn to Slide 5 and briefly review the strategy.

Our goal was to create focus, clarity, and alignments about the direction LyondellBasell would be moving over the next five years and provide a clear vision of what the company would look like in 2027.

Our strategy is built around three pillars, growing and upgrading the core, building a profitable circular and low carbon solutions business and stepping up performance and culture. In growing and upgrading the core, we are investing in businesses that fit with our competitive advantages and long-term strategy.

Our circular and low carbon solutions business is driving leadership in circularity and addressing the massive demand for these products from our customers and society.

In the third pillar, we are transforming the culture of LYB to embed a more comprehensive view of value creation, while continuing to recognize that stringent cost management is vital in our industry.

On Slide 6, we highlight our progress on our strategy in 2023 and the work underway over the next few years towards our 2027 goals. In just 10 months, since launching our strategy last March, LyondellBasell has unlocked nearly one third of the \$3 billion of incremental normalized EBITDA that we are targeting for 2027.

The successful startup of the PO/TBA plant this year is a major step forward in growing and upgrading our core by adding approximately \$450 million to our normalized EBITDA. And I'm very pleased to report that our Value Enhancement Program is far exceeding our initial expectations.

In 2023, the VEP achieved a year-end run rate of more than \$400 million of midcycle recurring annual EBITDA improvements. Michael will share more details on the progress of the VEP in a few moments.

As shown on the slide, we have numerous workstreams underway to build toward our strategic goals of \$2 billion of incremental normalized EBITDA by 2025, and a total of \$3 billion, by 2027.

With the announced sale of the ethylene oxide and derivatives business to INEOS for \$700 million, we are redirecting resources away from non-core businesses. The deal we announced in January to acquire 35% of NATPET in Saudi Arabia for approximately \$500 million is just one example of how we are growing our core cost advantaged olefins and polyolefins businesses.

We're making great strides and building strong foundations for our circular and low carbon solutions business. In 2023, we took a final investment decision for our first tranche of advanced recycling capacity in Germany, using our proprietary catalytic *MoReTec* technology.

And we are building partnerships to source waste plastic to supply our hub in Germany, while also securing waste plastic in Houston to supply our next investment an advanced recycling capacity.

And the VEP program is not a one-time initiative. Michael will describe our increased targets for 2024, and beyond.

While we have a lot of work ahead of us, I want to congratulate our team on the substantial progress we achieved on our strategic journey in 2023, ensuring a robust platform for longer term value creation and positive leverage to any market turnarounds.

On Slide 7, let's take a look at the steps ahead to deliver on our goals. We will continue to grow and upgrade our core businesses by focusing on advantaged feedstocks in growing markets, where LYB can build or extend our leading market position. Our new joint venture in Saudi Arabia is one example of how we will do this.

As we add new positions, we will continue to review our portfolio for businesses and assets that are not aligned with our long-term strategy. The divestiture of EO and derivatives business, the sale of our Australian polypropylene business, the shutdown of a polypropylene line in Italy and the exit of the refining business are all examples of how we are sharpening the focus of our business portfolio.

The rapid progress of the LYB Value Enhancement Program also contributes to our growth through low-cost capacity debottlenecks and productivity improvements. We're making good progress on building the foundations for our circular and low carbon solutions business, as we work towards our goal of \$500 million of incremental EBITDA by 2027 and \$1 billion, by 2030.

And our VEP is not only delivering growth and productivity, the VEP also supports the third pillar of our strategy to step up performance and culture by instilling a value-based

mindset across the company, with numerous initiatives to improve margins through customer and commercial excellence embedded in the VEP. And our work to transform our Advanced Polymer Solutions business is also an important part of our work to step up performance and culture.

All of our progress is supported by our foundations of efficient cash generation, disciplined capital allocation and our investment grade balance sheet. We're leveraging partnerships where it fits to achieve growth with capital efficiency and we're pursuing a very value focused investment program. And we remain steadfast in our support for a secure, competitive and growing dividend as part of our commitment to competitive shareholder returns.

And now, I will turn the call over to Michael to discuss the details of our financial progress.

Michael McMurray

Thank you, Peter, and good morning everyone. Please turn to Slide 8 and let's take a look at the progress of our Value Enhancement Program.

As Peter mentioned, LYB's Value Enhancement Program far exceeded our initial expectations in 2023. When we launched the program, we thought we could achieve a 2023 year-end run rate of \$150 million of mid-cycle recurring annual EBITDA improvement. With high engagement and rapid execution, our team achieved a run rate of more than \$400 million, by year-end 2023.

We have a strong management system in place for our VEP program. Our team has screened more than 13,000 ideas and more than 1,900 of these ideas have advanced to the execution ready stage of our process.

By the end of 2023, we executed on approximately 450 of these initiatives. Our system is robust and disciplined, and our internal and external auditors have validated our processes.

We currently believe this effort will add a total of \$600 million of recurring annual EBITDA by the end of 2024 and up to \$1 billion dollars, by the end of 2025. This is a significant increase from our initial target of \$750 million that we announced last March, driven by the enthusiastic buy-in of our colleagues and the tangible results that we have delivered so far.

The LYB Value Enhancement Program is providing meaningful contributions to our strategic financial goals and will continue to do so as we move forward.

On Slide 9, let me share more details about the progress on our VEP program during 2023.

Our targets for the program are described as year-end run rates relative to 2021 volumes and using average margins from 2017 to 2019, a time period that provides a good approximation of mid-cycle margins.

Through more than 450 initiatives, we generated over \$300 million of VEP EBITDA from the program, based on 2023 margins. This reflects the net recurring improvements throughout the year relative to 2021 volume, product mix and costs.

Now, let me highlight a few of the initiatives from last year. At our Lake Charles integrated polyethylene joint venture, we automated controls for a water treatment unit that reduced manual operations and water consumption. With a small investment, we were able to reduce LYB's share of cost by \$800,000 annually.

In our oxyfuels business, our cost advantaged U.S. production is exported in vessels to markets around the world. We worked with one of our terminal providers to encourage their investment in a vapor recovery system that allowed LYB to double vessel loading rates to reduce demurrage cost and vapor emissions for a net recurring benefit of \$1 million per year.

By investing resources to learn more about the needs of our customers, our polymer product development team allocated resources for new products to serve demanding applications in wire and cable sheathing for subsea infrastructure markets. This initiative improved recurring profitability by at least \$300,000 per year.

We hope these examples provides you with some insight into the hundreds of small initiatives that we expect to add up to \$1 billion of mid-cycle recurring annual EBITDA to LYB's run rate, by the end of 2025.

Please turn to Slide 10, and let me begin by highlighting the outstanding cash generation from our business portfolio during 2023. LYB generated a total of \$4.9 billion of cash from operating activities over the past year. Cash on hand increased to \$3.4 billion at the end of the fourth quarter. During 2023, we achieved cash conversion of 98%, well above our long-term target of 80%.

Our cash conversion was bolstered by working capital reduction of approximately \$700 million during the fourth quarter. The majority of the working capital benefit was from lower receivables and inventories. We expect our working capital needs will increase during the first quarter.

Our efficient cash generation allowed the company to return more than \$1.8 billion to LyondellBasell shareholders in 2023. This represents 53% of our \$3.4 billion of free cash flow for the year.

Let's continue with Slide 11 and review the details of our capital allocation over the past year. As Peter mentioned, we are committed to disciplined capital allocation as we execute our strategy and maintain our robust investment grade balance sheet.

During 2023, cash from operating activities fully funded \$1.6 billion in dividends, \$210 million in share repurchases and our capital investment program. In May, we increased our quarterly dividend by 5%, marking the 13th consecutive year of annual dividend growth.

This year, we invested \$1.5 billion in capital expenditures. We reached an important milestone with the successful startup of our new PO/TBA asset in 2023. With the completion of this world-scale project, our future capital expenditures will be increasingly focused on a portfolio of smaller projects to advance our strategy. This includes investments in small profit generating projects, integrated hubs for circular solutions, and hundreds of initiatives within the Value Enhancement Program.

We ended the year with \$3.4 billion of cash and short-term investments, then \$7.6 billion of cash and available liquidity. In line with our strategic focus on leadership and sustainability, we issued our inaugural green bond for \$500 million. LYB's robust balance sheet positions us well to move forward on our long-term strategy during the year ahead.

One last comment. We added over \$1 billion dollars of cash to our balance sheet in 2023 as a result of strong execution amid challenging market conditions. As a result, we are carrying about two times our stated minimum of \$1.5 billion. We have built a bit more cash because of the challenging market conditions and uncertain economic outlook that we have been navigating.

That said, our capital allocation priorities remain unchanged and we remain committed to returning 70% of our free cash flow to shareholders over the long-term.

Now I would like to provide an overview of the quarterly results for each of our segments on Page 12.

LYB's business portfolio delivered \$910 million of EBITDA during the fourth quarter. Our lower results reflect a significant decline in gasoline crack spreads and seasonally lower demand during the fourth quarter. Lower gasoline crack spreads negatively impacted our refining results, oxyfuels in the Intermediates and Derivatives segment and the value of co-product fuels in Olefins and Polyolefins Americas.

During the quarter, lower ethane and energy cost and increased polyethylene exports benefited our O&P Americas business. Overall, olefins and polyolefins demand remained soft, particularly in Europe, where utilization rates remained low. Lower demand and higher raw material costs negatively impacted our Advanced Polymer Solutions segment.

Across the portfolio, a non-cash LIFO inventory valuation charge decreased pre-tax for quarter results by approximately \$55 million. As a reminder, the LIFO impact reflects changes in inventory valuation over the full year and it's not necessarily limited to fourth quarter valuations.

Before we discuss our segment results in detail, let me discuss our capital expenditure plans for 2024. We expect that our capex will be approximately \$2.1 billion this year, a \$600 million increase compared to 2023. Our capital plan includes approximately \$800 million for profit generating growth projects and \$1.3 billion of sustaining investment to keep our assets running safely and reliably.

The increased profit generating capital includes investments to grow our circular and low carbon solutions business, as well as investments to lower the carbon footprint of our existing asset base, particularly in Europe. Funding required to drive our Value Enhancement Program is included in our capex plan.

We expect our 2024 effective tax rate will be approximately 20% and our cash tax rate will be a few percentage points higher.

In the appendix of the slide deck, we have provided additional 2024 modeling information, including impacts for major plant maintenance, costs associated with the exit from our refining business and other useful financial metrics.

With that, I'll turn the call over to Ken. Ken.

Ken Lane

Thank you, Michael. Let's begin the segment discussions on Slide 13 with the performance of our Olefins and Polyolefins Americas segment.

Fourth quarter EBITDA was \$604 million. During the quarter, a significant decrease in co-product values negatively impacted olefins margins. Polyolefins prices were stable domestically, while a very strong export volume led to some lower pricing in our overall portfolio.

Strong demand from export markets continues to drive increased polyethylene volumes and we didn't see the typical seasonal slowdown.

We operated our assets at approximately 85% of nameplate capacity to match market demand and continued to actively manage working capital.

Fourth quarter EBITDA included a LIFO inventory valuation benefit of approximately \$75 million.

During the first quarter, we expect polyethylene prices to remain firm with modest improvements in domestic demand and ongoing strength in export markets. We anticipate ethane and energy costs will remain favorable for our assets in the region, providing some margin tailwinds.

Overall, we expect to operate our O&P Americas assets at an average of approximately 80% during the first quarter, slightly lower than fourth quarter 2023, due to plant maintenance.

In December, we signed two new renewable power purchase agreements. With these agreements, we've achieved almost 90% of our goal to procure at least 50% of our global power from renewable sources by 2030.

In total, we have 12 agreements in place, representing more than 1.3 gigawatts of renewable power capacity.

As we mentioned last quarter, we announced our investment in Cyclyx, a joint venture with Agilyx and ExxonMobil. This partnership is focused on increasing plastic waste recycling infrastructure to improve circularity.

In December, Cyclyx announced the final investment decision to build the first Cyclyx circularity center in Houston. The circularity center will focus on increasing plastic waste recycling options through better sourcing and sorting of plastic waste. The facility will have the capacity to produce more than 130,000 tons of plastic feedstock per year for advanced and mechanical recycling and is expected to start up in 2025.

Now please turn to Slide 14 to review the performance of our Olefins and Polyolefins Europe, Asia and International segment. During the quarter, European markets remained weak with softer seasonal demand and lower consumer confidence. Polymer prices were modestly higher with an improved sales mix and stable naphtha feedstock costs.

Due to the low demand, we operated our assets at rates of approximately 65% during the quarter. The combined impact of the weak demand and low rates lead to a fourth quarter EBITDA loss of \$87 million.

As we move into 2024, we expect weak European demand will persist with ongoing consumer uncertainty. Nonetheless, we are seeing modest improvements in orders as some customers begin to restock and seek local supply as imports moving through the Red Sea are disrupted.

We expect to operate our European assets at a rate of 75% during the first quarter. Demand in China remains muted as customers manage inventories with the approach of the Lunar New Year amid a slow economic environment.

As Peter mentioned earlier, we are making great progress on our strategy to grow and upgrade our core businesses. Our recent announcement to acquire a 35% share of NATPET reflects our focus on assets that have long-term advantage. But we're also moving away from the assets that can't deliver long-term competitiveness, as demonstrated by last year's decision to close one of our two polypropylene assets in Brindisi, Italy.

We're also making good progress with building our circular and low carbon business. During the fourth quarter, we made the final investment decision to build our first commercial catalytic advanced recycling plant at our Wesseling, Germany site.

With an estimated capacity of 50,000 tons per year, this plant will utilize our differential *MoReTec* advanced recycling technology. And just like in Houston, we are collaborating with partners to secure plastic waste feedstock in Germany. In December, we acquired a minority share of Source One plastics, a plastic waste sourcing company in Germany.

Source One will provide the majority of the processed plastic waste feedstock to our new *MoReTec* asset. Through our integrated hub model, we are establishing an integrated circular value chain at scale.

Now please turn to Slide 15, and let's take a closer look at our new NATPET joint venture. A few weeks ago, we announced our agreement to acquire a 35% share of National Petrochemical Industrial Company, or NATPET, from Alujain Corporation in Yanbu, Saudi Arabia. The joint venture is a great example of how we are growing our core businesses with advantaged assets by leveraging LYB's leading technology and global market reach.

Today, NATPET consists of 400,000 tons of propane dehydrogenation, or PDH capacity, that converts cost-advantaged Saudi propane into propylene monomer to feed a 400,000 ton polypropylene unit utilizing LYB's proprietary *Spheripol* technology. The assets have been operational since 2009 and have generated an annual average of \$155 million USD in EBITDA over the five years from 2018 to 2022. NATPET's PP products serve a diverse range of customers across global markets.

As part of the transaction, LYB will leverage our global marketing network to sell a majority of the product on behalf of NATPET, creating a new revenue stream for LYB.

NATPET's assets are first quartile that have the advantage of sourcing local Saudi propane feedstock at a discount to global prices. Also, our investment in NATPET provides a platform for continued growth. In 2022, NATPET was awarded a new feedstock allocation that could support additional capacity. The partners are evaluating a second PDH and PP asset on the site that would benefit from meaningful synergies.

Previously, Alujain selected LYB *Spherizone* polypropylene technology for the potential expansion. The high-performance polypropylene solutions enabled by our proprietary

Spherizone technology provides the potential to expand NATPETs production into new applications and markets.

We expect our investment in NATPET will exceed our 12% target for unlevered internal rates of return. The additional capacity could provide even higher returns. We expect the transaction will close in the first half of 2024, following regulatory approvals and other customary closing conditions.

With that, I will turn the call over to Kim.

Kim Foley

Thank you, Ken. Please turn to Slide 16, as we take a look at our Intermediates and Derivatives segment.

Fourth quarter EBITDA was \$265 million. Oxyfuel margins declined due to a significant decrease in gasoline crack spreads, as well as an increased supply of oxyfuels after industry downtime during the third quarter.

Styrene margins were pressured due to higher benzene feedstock costs. LIFO inventory charges were approximately \$95 million.

In the fourth quarter, we recognized an impairment of \$192 million related to our PO/SM joint venture in the Netherlands. We operated our assets at a rate of approximately 70% during the fourth quarter due to low demand as well as planned and unplanned downtime across most businesses.

As we begin the first quarter, oxyfuel margins remain similar to fourth quarter levels. We anticipate higher volumes across the segment after downtime in the fourth quarter and plan to operate across the I&D segment at approximately 75% in the first quarter.

These operating rates reflect the impact of the recent winter freeze event resulting in unplanned downtime at our U.S. Gulf Coast assets.

In December, we announced an agreement to divest our ethylene oxide and derivatives business to INEOS for \$700 million.

As Peter mentioned earlier, we are taking decisive actions to grow and upgrade the businesses and assets that align with our long-term strategy, while exiting businesses where LYB does not have a path to a leading position. We expect the transaction will close in the second quarter following regulatory approvals and other closing conditions. Please note that the agreed transaction price is pre-tax and that these assets are heavily depreciated.

Now let's turn to Slide 17 and discuss the results of the Refining segment.

Fourth quarter EBITDA was \$51 million, including charges of \$40 million of LIFO inventory valuation. Refining margins compressed due to lower gasoline crack spreads. During the quarter, we operated the refinery at 85% of capacity due to planned and unplanned downtime, with an average crude rate of 230,000 barrels per day.

In the near term, we expect gasoline crack spreads will improve, offset by lower distillate cracks. We plan to operate the refinery at approximately 80% of capacity in the first quarter, including a planned coker outage with an estimated EBITDA impact of \$50 million.

Our team remains highly focused on safe and reliable operations as we continue to run our refining assets through no later than the end of the first quarter of 2025.

With that, I will turn the call over to Torkel.

Torkel Rhenman

Thank you, Kim. Now let's review the results of our Advanced Polymer Solutions segment on Slide 18.

Fourth quarter EBITDA declined to \$12 million. Margins were pressured by higher raw material cost and volumes decreased due to seasonally lower fourth quarter demand with a slowdown in December due to customer outages. LIFO inventory valuations benefits were \$10 million.

Looking ahead, we see signs of market recovery and expect modest demand improvement in the first quarter.

This year we continued our transformation journey with Advanced Polymer Solutions. APS results in 2023 were lower than 2022 and not reflective of our financial expectations for this business. Success with APS customers is largely based on project-by-project qualification. Today's underperformance is indicative of our low success rate in gaining new qualifications during prior quarters.

However, our laser focus on our customers is gaining momentum. We have seen a step up in our recent surveys of customer satisfaction. With an organization that is focused and accountable, we're making steady progress as we rebuild our project growth funnel.

Our growth pipeline is already delivering. During the fourth quarter of 2023, volumes improved by 2.5% over the prior year. I want to congratulate the APS team for achieving record safety performance in 2023.

I truly believe our customer focus, as measured by our recent customer satisfaction survey, our progress in refilling our growth funnel and our superior safety results reflects our attention to detail that provides a leading indicator for operational performance and eventual financial results.

With that, I will return the call back to Peter.

Peter Vanacker

Thanks, Torkel. I would like to thank the entire LyondellBasell team for delivering such resilient results, during a very challenging year.

To close out on the segments, let's turn to Slide 19 and discuss the results for our technology business on behalf of Jim Seward. During the fourth quarter, licensing revenue moderated after exceptionally strong results in the third quarter, due to the timing of licensing milestones.

Nonetheless, EBITDA for the segment exceeded the fourth quarter of the prior year. Fourth quarter catalyst volumes were higher than any quarter since the third quarter of 2022.

First quarter results for the technology segments were expected to improve due to increased licensing revenue and a further rise in catalyst volumes compared to the fourth quarter of 2023.

As Ken mentioned earlier, we will utilize our proprietary *MoReTec* technology as we build our first commercial scale advanced recycling plant in Germany. I'm very proud of the work our R&D team embarked on years ago to develop this differential and advantage technology from lab to commercial scale.

Let me now summarize our outlook with Slide 20. As we begin 2024, the majority of our businesses are continuing to face the slow demand seen in the fourth quarter of 2023. But we are seeing a few early signs of improvement. Our North American O&P business is seeing modest demand improvements.

In Europe, order trends were improving from a very low level, as our O&P customers begin to pursue modest restocking.

For the year, we expect normal seasonal demand improvements to begin near the end of the first quarter and continue through the summer.

As we progress through the second half of the year, we expect demand to benefit from moderating interest rates and reduced inflation. Durable goods are a critical market for LYB's products. Demand for durable goods lagged the economy during 2022 and 2023, as markets digested the extraordinary high levels of consumer activity that prevailed during pandemic era stimulus.

We expect moderating interest rates, reduced inflation and infrastructure-related stimulus spending will begin to support a gradual return to a healthier demand for durable goods, during the second half of this year.

China is the largest market for chemicals, exceeding North America and Europe combined, and we continue to watch closely for targeted stimulus and other measures that could drive improved economic growth in China. In the meantime, LYB will continue to advance on our strategic goals.

We are actively managing our portfolio to grow and upgrade our core businesses. You will continue to see actions supporting the growth of regional hubs that will serve as the engines for our profitable Circular and Low Carbon Solutions business. And our work to embed value creation into our corporate culture will continue to deliver results through our Value Enhancement Program.

We're now pleased to take your questions.

Operator

Thank you. Ladies and gentlemen, at this time, we will begin the question-and-answer session. As a reminder, if you have a question, please press the “*”, followed by the “1” on your touchtone phone. If you would like to withdraw your question, please press the “*”, followed by the “2”.

We do ask that you limit to one question.

Our first question comes from the line of Stephen Richardson with Evercore ISI. Please proceed with your question.

Stephen Richardson

Hi, thank you. Peter, I was wondering if you could just dig in a little bit on the expectations for the second half and maybe just a little bit more on the O&P businesses. What kind of recovery are you kind of underwriting in your outlook? And how do you think that plays out and any guideposts beyond the statements on durables we should be thinking about as the year progresses?

Peter Vanacker

Thank you, Stephen. As usual, very good question from your side. To start with, as we alluded to, I mean, we're still a bit prudent on the guidance for Q1. But when we are looking at the second half of this year, a couple of things that I want to point to. This has been the longest downturn that we have seen as far as I can look back in our history. So one would expect that there will be, if you look at inflation rates going down, interest rates going down, more consumer confidence in Europe, maybe also in China, that demand would go up. So from a demand side, one would expect that demand would go up. And that covers not only the O&P business, but also if you look at durable goods, especially. As we all know, demand has been very low last year in durable goods which, of course, has a lot to do with very high interest rates and therefore consumer behavior. So also there, you would expect that durable goods demand would go up especially in the second half of this year.

The United States, as you know, has been quite robust. We have been able to navigate. You see robust margins also on the polyethylene side. And also here, as you know, inflation rates are going down. You see already a little bit of indications. There is more house builds, houses already that are being sold. And that, of course, has a direct impact on demand for durable goods.

Operator

Thank you. Our next question comes from the line of Steve Byrne with Bank of America. Please proceed with your question. Mr. Byrne, your line is live.

Steve Byrne

Sorry about that. Pardon me, I was on mute sorry, about that. Just regarding this NATPET joint venture, it seems like it's roughly 10x EBITDA; is that roughly right? And do you see potential for this investment to generate a higher EBITDA down the road?

And I just wondering the basis for that investment, given it seems like polypropylene is a bit oversupplied. And I guess my other question on it would be, what are the contract terms for the propane that you get from Saudi, any risk that price could get escalated down the road?

Peter Vanacker

Thank you, Steve. Also a good question on NATPET. First of all, I mean, we are very pleased that we were able to sign this deal that has been work of a core team in our company where I was personally, of course, deeply involved during quite an important period of time to come to this conclusion. When you look at the amount of money that we paid, and Ken alluded to that in his remarks, then one cannot just look at the EBITDA, mid-cycle EBITDA of \$150 million for the entire company.

But what you don't see and what needs to take into consideration is the fact that we are the path to market. We are generating value for the company that comes out of selling the products outside of Saudi Arabia to our other markets. And therefore, also strategically very important because we have a very sustainable low-cost feedstock basis that we have negotiated that is included in the deal so that we are better positioned in polypropylene to go to certain markets where maybe today, we don't have the best position. And here, let's not forget that we did close one line at our Brindisi assets in Italy as well.

In addition to that, as we alluded to we have the income streams generated out of our license agreements. We have the opportunity to continue to invest with the second line next to the existing line to capture synergies there. And that's why Ken alluded to the fact that with the current deal, we have an IRR which is above 12%. But then as we do the second step, then we would be higher to say, quite higher than 12% IRR. No final investment decision yet, but it is also part of the consideration in doing that first step.

Michael McMurray

Hey Steve, the multiple is probably closer to 9 versus 10, just for clarity.

Peter Vanacker

Without taking into consideration, I mean, marketing fees, etc., etc.

Operator

Thank you. Our next question comes from the line of Patrick Cunningham with Citi. Please proceed with your question.

Patrick Cunningham

Hi, good morning. Maybe within the \$800 million in growth CapEx allocated for this year, how much of that is directly related to Circular and Low Carbon Solutions? And beyond that, what should we expect in terms of inorganic growth and additional investments in that space for 2024?

Peter Vanacker

I will just refer to the Capital Markets Day, we said about 15% over the cycle. Michael, do you want to add something to that, for next year?

Michael McMurray

Yeah. I mean what I'd say is that the guidance that we gave at Capital Markets Day for capex remains intact. As a reminder, we said over the period, '23 to '25 on average, we'd spend \$2 billion. We guided to \$2.1 billion today. And as Peter said, the expectation for the CLCS, our circularity business, it's about 15% to 20% over the period.

Now specifically around inorganic growth, I'd probably say a couple of things. I think at our Capital Markets Day we were clear that we hope to get some M&A done over the next few years. I think we were pretty clear the criteria that we shared in regards to growing and upgrading the core.

I think the Sasol joint venture, our new PO/TBA facility, the circularity investments that we've made and the refining exit are all great examples. And then our recent announcement of our EO&D exit is another great example. And quite frankly, it was a great valuation with the best owner mindset.

We also shared our approach to growth through M&As and joint ventures at our Capital Markets Day and I think with our NATPET acquisition we're off to a great start. And this clearly fits the framework which we shared back in March. And then, it also has a great opportunity for future attractive growth.

And then finally, at our March Capital Markets Day, we shared our goal of getting to \$10 billion of EBITDA, normalized EBITDA in 2027, which assumed we would deploy roughly the remaining 30% of our free cash flow that we haven't returned to investors to fund our future M&A ambitions. But I want to be clear about a couple of things.

Our commitments to investors remain steadfast and our capital allocation principles and priorities remain unchanged. We will be disciplined acquirers. We will not burn your cash, we will not build a lazy balance sheet. If we can't find compelling transactions, we'll give back more of your cash to you.

Operator

Thank you. Our next question comes from the line of David Begleiter with Deutsche Bank. Please proceed with your question.

David Begleiter

Thank you, good morning. Peter, just in I&D, how much did the PO/TBA plant contribute in 2023? Do you think mid-cycle earnings power here is still with the new PO/TBA plant above \$2 billion? And when do you think you'll start achieving a run rating at that mid-cycle earnings level? Thank you.

Peter Vanacker

Happy birthday, Dave. We heard that you have your birthday, today.

David Begleiter

Thank you very much.

Peter Vanacker

Good question. If I take one step back on the I&D business in Q4, maybe a couple of numbers and stay with me so \$265 million, excluding identified items is the EBITDA that we generated in Q4. But one needs to take into consideration, of course, that we had a heavy LIFO impact of \$95 million. So if I add the LIFO impact of \$95 million, then actually the underlying results were \$360 million for Q4, comparing to Q4 2022, which was \$291 million.

So, a quite underlying performance, good quarter in I&D, and I did not even take into consideration the fact that we had scheduled turnarounds in Botlek as well as in Bayport. So we alluded to that in our guidance at the time when we released the Q3 results of an impact of about \$120 million.

So underlying quite a good quarter in I&D. And of course, part of that was also due to the fact that we very successfully started up our PO/TBA plant. The new PO/TBA plant, we alluded to mid-cycle margins, \$450 million. We said last year in year one, so that means 2023.

We would run at a minimum of 50% nameplate capacity. We overachieved that target. We ran at approximately a little bit more than 60%, I would say. And then, also, when we look at this year, we will continue to ramp up, and we will do it in a very disciplined way, reflecting on market demand for propylene oxide and oxyfuels.

But one may see further progress, I would say, probably going to 70%, maybe exceeding 70% capacity utilization. And then when we move into 2025, that's where one would see the full benefit of the PO/TBA plant, in terms of capacity utilization.

Operator

Thank you. Our next question comes from the line of Vincent Andrews with Morgan Stanley. Please proceed with your question.

Vincent Andrews

Thank you very much. Just on the Value Enhancement Program. I'm just trying to understand the impact to '23 and '24, a bit better. If we just sort of kind of look at a ratio of sort of what that 2017 to 2019 EBITDA was at Lyondell then versus what it was in 2023. If we apply that ratio to the VEP numbers, would that be about right in terms of what you enjoyed from it in '23 and what you expect in '24?

Michael McMurray

Yeah, what I'd say, I mean, hopefully, you heard my prepared remarks, Vincent, so the benefit, the actual benefit in our P&L for 2023 was approximately \$300 million. And then we guided for '24 for an exit run rate of \$600 million. Now if you're trying to draw a line from '23 to '25, it looks like that kind of the pace of change slows a bit. But keep in mind that last year, we focused on low-hanging fruit, things that didn't require investment and that we could execute upon very quickly.

So, we're in kind of building up projects again as we sit in this year, but we have high, high confidence in the outlook that we gave up to \$1 billion in 2025 and again, \$300 million of P&L benefit in '23, actual.

Operator

Thank you. Our next question comes from the line of Michael Sison with Wells Fargo. Please proceed with your question.

Michael Sison

Hey, cheers. In terms of 2024, a lot of chemical companies who've reported thus far have sort of said their earnings could recover or be better in '24 versus '23. It sounds like your first half is going to be a little bit challenged with demand being weaker and the second half being a little bit better. So when you sort of total up potentially what you see in '24, should earnings be up, flat or down or just maybe directionally for the full year, how do you think about the setup for earnings?

Peter Vanacker

Well, Michael, I think you said it, yourself. I mean, Q1, still modest, Q2 seasonal demands have been picking up. And then what I said at the beginning also second half of the year, we expect at least, that we will see interest rates going down, demand for durable goods, I mean going up, some recovery in Europe, some recovery in China. So as a consequence, if you add it all up, one would expect that earnings are going to be better than last year.

Michael McMurray

But mostly in the second half.

Peter Vanacker

To be clear.

Operator

We'll go on to our next question, comes from the line of Kevin McCarthy with Vertical Research Partners. Please proceed with your question.

Kevin McCarthy

Yes, good morning. Thank you. In 2024, would you expect your regional mix of earnings to differ, materially, from 2023? Part of the reason I ask is it looks like you're guiding to a tax rate of 20% and often, regional mix is the reason behind that, but perhaps there are other reasons you might call out. Maybe you could just kind of talk through the dynamics there would be helpful.

Michael McMurray

Yeah, happy to talk through it. So yeah, the ETR we guided to of 20% is up roughly 1 percentage point versus what was in 2023, so not a huge story. There's a few give and takes. Now we did guide our cash tax rate to be up a couple of percentage points versus last year and also our ETR from 2023, and that's largely driven by a decrease in U.S. tax depreciation and also the gain on the sale of our EO&D business. Hopefully, that's helpful.

Operator

Thank you. Our next question comes from the line of John Roberts with Mizuho. Please proceed with your question.

John Roberts

Thank you. Could we get an update on your China operations, both in PO, styrene and your polyolefins JVs?

Peter Vanacker

Yes, John. Welcome back. Let me give that question to Ken, the opportunity.

Ken Lane

Yeah, sure. I'll take a question for O&P and then maybe Kim, you can comment on I&D. But for O&P, we continue to operate the joint venture at technical minimums. The focus really is on finding better product mix and customer mix in region.

Our focus when we entered that joint venture was to build out an increased presence in the domestic market because we do market the high-density polyethylene and polypropylene from the asset. The team did a great job with that, last year. So earnings, of course, are still very challenged in China.

If you look at average margins, they're still slightly negative, which we're seeing that in our asset. Even with a new world-scale asset, it still is a very challenging market, and we expect to start to see some improvement in that in the second half of the year. But so far, demand has been, I'd say, modestly improving, but haven't seen really an improvement in margins yet. Kim.

Kim Foley

I would say as it relates to the joint ventures we have on the propylene oxide side, we ran both of those JVs above 95% operating rates last year, excluding a turnaround, which was significantly higher than other PO plants in that region. As Ken alluded to, the margins were rather thin. We saw high raw material costs and we also saw high utilities.

But as we've mentioned before, these are the best technologies that we have in the region. They are very cost competitive. They sit on integrated sites owned by a very good operator with expertise in both of these technologies. And we think as we go forward, we have huge potential here.

Peter Vanacker

And may I add to that, also, you probably noticed some news flow around China, phasing out chlorine-based propylene oxide technologies towards 2025. The majority of propylene oxide capacity in China that would be phased out for time, which also fits for us very well together with our global strategy, the successful start-up of our PO/TBA plant. And we are running this business successfully, under Kim's leadership from a global basis.

Operator

Thank you. Our next question comes from the line of Mike Leithead with Barclays. Please proceed with your question.

Mike Leithead

Great, thank you. Good morning, guys. I wanted to ask around O&P EAI. EBITDA has been below breakeven I think four out of the last six quarters. And I appreciate demand isn't great across most markets. But it just seems like there's been a bit of a shift here versus the profitability in the past decade. So, do we need to take a bigger restructuring overhaul to make this business profitable again? Do we need to wait for the world to get better? I mean, just how are you approaching that business here in '24?

Peter Vanacker

Yeah. Thank you, Mike. A very good question. And you've seen from our actions already last year, that we are turning around every stone. We did shut down one line in Brindisi, which is an important capacity. We've seen that there has been a couple of other announcements in the marketplace in terms of consolidations. We continue to look, of course, at the entire portfolio. That's what you would expect us to do.

But having said that, if I also reflect back on Q4. So in a big picture on Q4 the company for us was towards the end of the year, we wanted to also optimize our cash flow and working capital. And we freed up about \$700 million in working capital in that Q4. And as a consequence, of course, also, Ken steers his business towards lower than what we had originally guided to; 75% of capacity utilization was the guidance.

We reduced at really surprisingly low levels, 65% of our capacity utilization. Again, in the context of also with the current market environment, optimizing our working capital. Ken, anything you want to add?

Ken Lane

No, that's it. I mean, that just impacted the P&L with the absorption of the fixed costs that go along with that. But we pulled hard on the working capital lever, and we're going to continue to stay focused on maximizing cash flow, it's a challenging environment.

Peter Vanacker

Yes. And we see the future also in Europe. You see also that regulation is progressing in terms of renewable and circular solutions, which is actually also what we are focusing upon, I mean, with quite a lot of activities in terms of building up our Cologne hub. The final investment decision for our *MoReTec-1* facility, but lots of joint ventures and feedstock cooperations that we have built up in the meantime.

So that in Europe, I continue to believe that these circular and renewable solutions, they demand local supply chains. So therefore, it will be very important to have such a leading position in a local market with the access to brand owners or APS business, access to OEMs as well.

Operator

Thank you. Our next question comes from the line of John McNulty with BMO Capital Markets. Please proceed with your question.

John McNulty

Yeah, thanks for taking my question. Just a follow-up on the NATPET joint venture. I guess, can you help us to understand, in terms of the ability to upscale that with the additional allocation, is it similar in scale or size, would it be kind of the 400 KTA? And also, when you think about the timing of financial investment decision and also how the capital gets allocated, is it going to be proportional is the same kind of 35%, 65% or is there some different variation to that? Can you help us to think about those?

Peter Vanacker

Yeah, the current capacity, as you rightfully said, is around, 400 KT, And so, with the other technology that Ken referred to, we would be able to scale up to in total capacity of 1 million tons. Again, we have 35% of the joint venture. So that 35% is valid for the current capacity, but we can also be valid for future capacity, if we take a final investment decision. Ken some more information that you want to share?

Ken Lane

Yeah, I'll just add that part of the synergy that you had talked about before is that region is short of propylene. And so, we're going to have additional propylene capacity with this expansion, which is one of the synergies around potentially executing that. But it will be financed by the joint venture and yes, it'll be proportionate for the shareholders, but we don't expect to be putting cash in. That's going to be something financed by the joint venture.

Operator

Thank you. Our final question, this morning, comes from the line of Matthew Blair with Tudor, Pickering, Holt. Please proceed with your question.

Matthew Blair

Good morning. Looking at the 70% payout target versus free cash flow just in the context of increasing capex, when you're considering these payout targets, why is the denominator free cash and not more of like a cash from operations? Don't you need to balance these returns on the growth investments against returning cash to investors.

Michael McMurray

Not sure I fully understand your question, but it's pretty typical when you're giving payout targets to give it on the free cash flow line versus operating cash flow.

Peter Vanacker

Matt, we also, at the Capital Markets Day guided toward, that what is the capex level that we are investing so sustainable capex around. I mean that \$1.2 billion, \$1.3 billion a year. And then the growth capex, we also said we're going to be pretty much in the range of our historic spending somewhere between \$2 billion and \$3 billion on a yearly basis depending on how these projects come. So I think that helps you, to do the back of the envelop calculation, whatever cash flow number you take.

Operator

Thank you. Ladies and gentlemen, that concludes our time allowed for questions. I'll turn the floor back to Mr. Vanacker for final comments.

Peter Vanacker

Okay. Thank you, again, for all the excellent questions. And of course, I also want to thank our global team for delivering outstanding value and maximizing cash conversion during these challenging times. We look forward to sharing more updates over the coming months with further progress on our long-term strategy. We wish you all a great weekend and stay well, stay safe. Thank you.

Operator

Thank you. This concludes today's conference call. You may disconnect your lines at this time. Thank you for your participation.