LyondellBasell Industries
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<u>Q&A Participants</u>
Steve Byrne - Bank of America
Matthew Blair - TPH
Frank Mitsch - Fermium Research
John Roberts - Mizuho Securities
David Begleiter - Deutsche Bank
Kevin McCarthy - Vertical Research Partners
Chris Perrella - UBS
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Chris Parkinson - Wolfe Research
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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, and welcome everyone to today's call. Before we begin the discussion, I would like to point out that a slide presentation accompanies the 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.

Joining today's call will be Peter Vanacker, LyondellBasell's Chief Executive Officer; our CFO, Michael McMurray; Kim Foley, our Executive Vice President of Global Olefins and Polyolefins and Refining; Aaron Ledet, our EVP of Intermediates and Derivatives; and, Torkel Rhenman, our EVP of Advanced Polymer Solutions. During today's call, we will focus on second quarter results as well as updates on our long-term strategy. 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 second quarter results. Yet again, our people did an excellent job navigating challenging market conditions whilst being laser focused on the execution of our strategy.

Let's begin with slide three and discuss our continued leadership in safety performance. LYB has a history of excellence in operational performance, with safety being a core part of our success. Going back to 2010, we have consistently delivered industry-leading safety results. But more importantly, we have made significant improvements towards our goal to operate safely each day with zero incidents, injuries, or accidents. LYB's June year-to-date total recordable incident rate for employees and contractors is 0.13. For comparison, in 2010, our incident rate was 0.42, more than three times higher than today.

Safety is foundational to what we do. Getting it right ensures the well-being of our workforce, but also benefits our operational excellence performance and financial returns. Our team has demonstrated outstanding focus to reach this point, and we remain committed to further improvements.

Today, I'm excited to discuss our actions to deliver resilient results, as well as the excellent progress on our long-term strategy for LYB. Please turn to slide four as we briefly review the quarter. Second quarter underlying business results improved by nearly 30% over the first quarter, driven by increased volumes from our operations. North American demand for polyolefins continues to improve, while feedstock and energy costs remain low.

Our European Olefins and Polyolefins results improved due to our flexibility to increase our utilization of advantaged LPG feedstocks. Within Intermediates and Derivatives, the benefits from LYB's expanded PO/TBA capacity are clearly seen in our record quarterly oxyfuel sales volumes.

Earnings were $2.24 per share, with EBITDA of $1.4 billion. LYB generated an impressive $1.3 billion in cash from operating activities. Our strong cash generation provided support for the disciplined execution of our strategy.

Let's turn to slide five and review the three-pillar strategy that is driving our focus on strategic growth and long-term value creation. As we described during fourth quarter earnings, we are making good progress on our goal to add $3 billion in incremental normalized EBITDA by 2027, with nearly one-third of that target unlocked during 2023.

Last quarter we took a deeper look into how we are building a profitable circular and low-carbon solutions business. Today we will describe the work underway to grow and upgrade our core businesses.

When we talk about growing and upgrading our core, we are very clear about the criteria we use to define businesses that are core to our portfolio. Moving to slide six, let's review these criteria. We are working hard to build up a portfolio that is focused on leading market positions and growing end markets that deliver attractive returns well above our cost of capital and leverages on access to advantaged, circular, and renewable feedstocks. You will see that once we have executed this transformation, we will be a much more profitable, focused, and streamlined company.

Our decisions on investing in organic growth or disciplined M&A are grounded by our commitment to pursue attractive returns well above our cost of capital. We are leveraging LYB's technology and global market positions to increase our access to advantaged feedstocks typically found in North America and the Middle East.

And finally, as we covered last quarter, we're making great progress in building a profitable Circular and Low Carbon Solutions business. Historically, we've defined advantaged feedstocks as low-cost NGLs in North America and the Middle East. As we grow our CLCS business, we are expanding this definition to include favorable positions for circular and renewable feedstocks.

As you know, we have implemented a lot of actions to grow and upgrade our portfolio in parallel with great focus and speed. May was again a busy month for us with the completion of the sale of our EO&D business and the acquisition of our stake in the NATPET joint venture. Importantly, we also announced a strategic review of some of our European assets that will reposition our footprint for future sustainable success.

On slide seven, let me highlight our goals for reshaping LYB by simultaneously growing and upgrading our core businesses. We are adding value through growth investments in, for example, our PO/TBA capacity and our formation of the NATPET joint venture in Saudi Arabia. We are also continuously evaluating projects and expect to find more opportunities that will be accretive for LYB.

Our Value Enhancement Program is also delivering growth through incremental production capacity and improved margins. LYB's VEP is not a one-time cost-cutting initiative. Our VEP is our new way of working, focused on unlocking value, and is becoming embedded in LYB's culture. Michael will share some more details on our VEP progress in a few moments.

Our motivation for upgrading the portfolio is illustrated on the right side of slide seven. In some cases, upgrades were accomplished by divesting or exiting non-core businesses. One example is the Houston Refinery, a capital-intensive asset that has historically only delivered brief periods of profitability. After we shut down the refinery by no later than the end of the first quarter 2025, LYB's average EBITDA margin will actually expand by about four percentage points.

Our divested ethylene oxide and derivatives business did not provide LYB with a leading position and did not fit our criteria for growth. Simply put, we were not the best owners. The strategic review of our European assets will position our footprint for a sustainable future. All of these moves aim toward building a stronger, more focused, and more profitable business portfolio for LYB.

Let's drill into our European strategic review on slide eight. We are undertaking this review to position LYB's regional footprint for future markets. Our goal is to reshape our European business portfolio in alignment with our long-term strategy for lasting success.

Europe remains a core market for LYB. Our analysis determines that the six assets listed on the top left in their current configuration do not meet LYB's criteria for a core business. At this point, all options are on the table. Just like our ethylene oxide and derivatives business, these assets could well have a strategic fit and profitable future with another owner. Divestiture of the assets as a group or separately is a possibility. Or we may determine that, like our Houston refinery, rationalization is the best option for some sites.

While it is too early to speculate on the outcomes, the impact on the company's global portfolio is relatively limited. As you can glean from the chart, the assets subject to review only represent about 13% of our global capacity for these product lines. LYB will continue to have a strong European presence. In I&D, our core European assets utilize LYB's world-leading PO/TBA technology. In Germany, we are investing near Cologne to build our first circular and renewable solutions hub. And our Technology segment will maintain a strong presence in Italy and Germany.

We will continue productive engagement with all relevant stakeholders at the impacted sites. This includes local governments, our business partners, potential buyers, and most importantly, our employees; who continue to demonstrate high commitment to safe, reliable, and efficient operations, despite the ongoing uncertainty. Our aim is to move swiftly to maximize value for LYB and all stakeholders.

With that, let me turn the call over to Michael to discuss our financial results in more detail.

Michael McMurray
Thank you, Peter. And good morning, everyone. Please turn to slide nine and let me start by discussing our resilient cash generation.

Over the past year, LyondellBasell generated $4.4 billion of cash from operating activities. Our team converted EBITDA into cash at an impressive 95% cash conversion rate during the last 12 months. As a result, we were able to return almost $1.8 billion to shareholders through dividends and share repurchases. This represents nearly 70% of our $2.6 billion of free cash flow, in line with our long-term target. At the end of the second quarter, our cash balance was $2.9 billion.

Let's continue with slide 10 and review the details of our second quarter capital allocation. As Peter mentioned, we generated an impressive $1.3 billion of cash from operating activities. During the quarter, we returned $513 million through dividends and share repurchases, while funding $484 million of capital investment. In May, we increased our quarterly dividend by 7% to $1.34 per share, continuing our track record of providing a secure, growing, and competitive dividend for our shareholders. Our team is committed to balanced and disciplined capital allocation as part of our long-term strategy.

During the quarter, we divested the ethylene oxide and derivatives business for $700 million. Within a few weeks, we invested approximately $500 million to acquire a 35% share of NATPET integrated polypropylene joint venture in Saudi Arabia.

We finished the second quarter with approximately $7 billion of available liquidity. In July, LYB successfully amended and extended the maturity of our revolving credit facility to 2029, while further strengthening our liquidity by increasing the size of the facility by $500 million to $3.75 billion.

Let's continue with a brief update on our VEP progress on slide 11. The Value Enhancement Program is a highly successful and integral component of our long-term strategy. We are confident in our estimate that the VEP will contribute approximately $400 million to EBITDA in 2024. Our team is rapidly delivering value less than two years after first launching this program.

To provide more detail on this year's progress, we have broken out contributions by business segment and category. As you might expect, the segment with the largest contribution is also our most profitable segment, O&P Americas, generating about $265 million of incremental value. In 2024, we anticipate approximately $280 million of benefit across the company from improved product mix and increased variable margins. We anticipate about $95 million of benefit from higher volume, driven by improving reliability and increased rates.

While the Value Enhancement Program is primarily focused on increased value generation, the program has also identified opportunities to improve our leading fixed cost position. Overall, we estimate that lower fixed costs across our manufacturing and corporate functions will benefit our results by approximately $25 million this year. As Peter mentioned, LYB's VEP program is a new way of working and unlocking value that is becoming embedded as an evergreen process in our culture.

Let's turn to slide 12 and I will provide a brief overview of the results of each of our segments. LYB's business portfolio delivered $1.4 billion of EBITDA during the second quarter, almost 30%

higher than the prior quarter. Seasonal summer demand, coupled with higher production from our asset base, led to increased volumes. Margins modestly improved across most of our businesses.

In early July, Hurricane Beryl impacted our operations across the U.S. Gulf Coast. LYB proactively shut down some of our assets ahead of the storm. Our prudent approach reduces the potential for damage to our assets and the surrounding community during adverse conditions. As a result, we did not experience any workplace injuries and property damage was not material.

Nonetheless, we estimate that storm-related downtime will impact third quarter EBITDA by approximately $65 million, with approximately 75% in our O&P America segment.

We have relatively modest levels of maintenance activity planned for the remainder of the year. In the appendix to this slide deck, we provide updated 2024 modeling guidance for planned maintenance impacts and other financial metrics.

With a sharp focus on working capital, we continue to align our operating rates to meet market demand. During the third quarter, we expect operating rates of 85% for our North American Olefins and Polyolefin assets, 80% for our European Olefins and Polyolefin assets, and 75% for our Intermediates and Derivative assets.

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

Kim Foley
Thank you, Michael. Let's begin the segment discussions on slide 13 with the performance of the Olefins and Polyolefins America segment. During the second quarter, O&P America's EBITDA was $670 million. Increased LYB production led to higher volumes and margins. We were pleased to see that integrated polyethylene margins were supported by modestly higher ethylene and polyethylene prices, while ethane and natural gas costs remain low.

Demand for North American polyolefins is strengthening in 2024, with June year-to-date industry polyethylene sales up by nearly 11% over the first half of 2023. Strong demand pull from both domestic and export markets is absorbing recent capacity expansions in the region. LYB is well positioned as the third largest polyethylene producer in North America, with strong customer relationships built over decades.

In the third quarter, we anticipate continued seasonal demand strength. Low feedstock and energy costs are expected to persist, benefiting North American integrated polyolefin margins.

Amid a backdrop of relatively high oil prices, the favorable oil-to-gas ratio provides an advantage to North American producers relative to oil-based production in other parts of the world.

Despite disruptions from Hurricane Beryl in early July, the U.S. olefins and polyolefins markets remain well supplied. Nonetheless, the U.S. Gulf Coast hurricane season is still young with potential for additional disruptions over the coming months. During the third quarter, we will remain focused on aligning our operating rates to serve domestic and export market demand, targeting 85% utilization.

After a decade of unprecedented growth, North American polyolefins capacity additions have slowed down. Please turn to slide 14 as you review the changing outlook for new supply. In the early 2010s, the advent of shale-based oil and gas production triggered a wave of olefins and polyolefins capacity additions to take advantage of the abundant and low-cost NGL feedstocks. With one or sometimes two world-scale plants coming online nearly every year for over the past decade, North American domestic and export markets for polyethylene and polypropylene became well supplied, leading to reduced operating rates and lower margins.

Over the next few years, very little new capacity will come online in North America. After two years of tepid growth, polyethylene sales volumes are growing at double-digit rates during the first half of this year. Demand growth in Latin America is increasingly served by North American supply. Polypropylene volumes are also improving, but remain constrained as we await the inevitable rebound in demand for durable goods. With North American demand growth returning to long-term trends and no meaningful local supply on the horizon, tightening supply and demand balances and higher utilization rates bode well for LyondellBasell's core polyolefins business.

Please turn to slide 15 as we review the results of our Olefins and Polyolefins Europe, Asia, and International segment. In the second quarter, LYB's integrated polyethylene margins expanded with the increased utilization of cost-advantaged feedstocks such as LPGs, resulting in EBITDA of $70 million. Approximately 40% of LYB's European ethylene production came from advantaged feedstocks. Additionally, higher prices for olefins and coproducts supported European cracker margins amidst modest seasonal demand improvement for polymers.

Red Sea logistic challenges have largely subsided during the quarter, but significant higher shipping costs constrain European imports, benefiting local producers.

Looking ahead, we anticipate steady olefins and polyolefins demand through the summer in Europe. In September, we will begin planned maintenance at one of our German crackers that will continue into the fourth quarter. As a result, we are targeting approximately 80% operating rates for the third quarter.

As part of our strategy to grow and upgrade our core businesses, we completed the acquisition of a 35% share of the Saudi Arabian NATPET joint venture at the end of May. The joint venture currently operates 400,000 tons of integrated polypropylene capacity using local cost-advantaged propane raw materials and LYB's Spheripol polypropylene technology. Together with our partner Alujain, we are evaluating opportunities to significantly grow the joint venture by leveraging new feedstock concessions in Saudi Arabia.

And as Peter discussed, in May, we also announced the strategic review of some of our European olefins and polyolefins assets. Our team is working diligently to evaluate our options and order position LYB for future success in the region.

Now let's turn to slide 16 and review the results of the refining segment. Second quarter EBITDA was $15 million. Higher production following the first quarter downtime was more than offset by lower Maya crack spreads. Margins decreased driven by lower distillate cracks, partially offset by slight improvements in gasoline cracks, with modest second quarter demand indicating a slow start to the driving season. Our hedging program benefited second quarter results. Industry operating rates remained relatively high, leading to ample market supply.

In the near term, we expect summer demand to support stable gasoline crack spreads and continued high operating rates for refiners. We intend to operate at approximately 90% of capacity in the third quarter. Looking ahead, we remain committed to the safe and reliable operation of these assets until we shut down, no later than the end of the first quarter of 2025. Additional details regarding our ramp down will be provided during our third quarter update. Our team is making good progress in evaluating projects to transform the site in support of our circular and low-carbon solution growth strategy.

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

Aaron Ledet
Thank you, Kim. Please turn to slide 17 as we look at the Intermediates and Derivatives segment. In the second quarter, segment EBITDA was $501 million, driven by increased production and seasonal demand for oxyfuels.

We delivered record quarterly oxyfuels volumes by increasing production from our newest PO/TBA asset, which operated at close to benchmark rates during the quarter. Oxyfuels margins remain robust as the summer driving season is underway, with strong octane demand keeping margins well above historical levels.

Intermediate chemicals improved due to higher margins and volumes for acetyls, driven by industry outages and improved production from LYB's assets. Propylene oxide and derivatives margins were steady, as demand for durable goods remain modest against a backdrop of high interest rates in the impacts of inflation.

As we move through the third quarter, we expect seasonal demand will continue to benefit oxyfuels margins through the remainder of the driving season. Low costs for butane raw materials and steady premiums for octane should provide continued support for oxyfuels profitability.

In line with our guidance, planned maintenance at one of our Bayport PO/TBA assets will begin later in the third quarter and continue into the fourth quarter. We will continue to match our production with market demand and expect to operate our I&D assets at rates of approximately 75% during the quarter.

As Michael mentioned earlier, we completed the sale of our ethylene oxide and derivatives businesses to INEOS for $700 million. During the second quarter, we recorded a book gain on the sale of $293 million, which is reflected as an identified item in our second quarter results. Our work to grow and upgrade our I&D segment continues as we evaluate our Maasvlakte PO/SM joint venture in the Netherlands as part of the ongoing European strategic review. We are working closely with our partner in the JV, Covestro, local stakeholders, and our workforce.

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

Torkel Rhenman
Thank you, Aaron. Please turn to slide 18 as we review the second quarter results for the Advanced Polymer Solutions segment. Second quarter EBITDA was $40 million. Margins increased across most APS businesses as our transformation work and seasonal improvements led to modestly higher pricing. Lower automotive production in Europe led to a slight decrease in volumes.

Looking ahead, we expect modest improvement in volumes through the remainder of the year, driven by our strategic initiatives and focus on restoring our growth pipeline. We anticipate headwinds from typical seasonal downtime at automotive OEMs in the third quarter, but our masterbatch business has shorter qualification cycles and offers more opportunities for near-term improvement.

Our team is focused on continuously expanding our growth funnel and increasing the win rate with our customers. We're investing in our core team with a growth and value mindset to deliver on our long-term goals for the APS business.

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

Peter Vanacker
Thank you, Torkel. Please turn to slide 19 and I will discuss the results for the Technology segment on behalf of Jim Seward. Second quarter EBITDA of $84 million reflected moderating licensing and catalyst revenue, normalizing after strong first quarter results.

In the third quarter, we expect that revenue associated with licensing milestones will increase, coupled with high catalyst volumes. As a result, we estimate that third quarter Technology segment results will be similar to first quarter results.

Now let me summarize the second quarter, our outlook, and our long-term strategy with slide 20.

LYB's second quarter results reflect higher production volumes and modest seasonal improvements in market conditions. Looking toward the second half of the year, we continue to expect a slight improvement over our first half results with a slow recovery in global markets.

LYB's assets in the U.S. and Middle East are well positioned, operating in regions where low costs for energy and feedstocks provide a durable competitive advantage relative to oil-based production.

Our team remains disciplined in our capital allocation strategy and delivering high returns to our shareholders. Our balance sheet is in great shape and we are well equipped to succeed as market conditions modestly improve.

Our Value Enhancement Program is on track to contribute approximately $400 million to EBITDA in 2024. We are thrilled with the enthusiasm and results from our progress so far and look forward to providing a more substantive update on our VEP next quarter as we dive deeper on how we are stepping up our performance and culture at LYB. At our Capital Markets Day last year, we outlined our long-term strategy. Through leading technologies and market positions, we are executing on this strategy to grow our global footprint and upgrade our core businesses.

Our strategy will not only grow LYB, but will also reshape our business portfolio to improve profitability and create sustainable competitive advantages. As Kim highlighted earlier, we see North American polyolefin demand improving in 2024, returning to work long-term historical growth rates. As we look ahead, limited capacity additions in North America bodes well for continued improvements in operating rates and associated margins over the coming years.

I am proud to lead our high-performing team as we take decisive actions to unlock value, reshape LYB, and position our company for sustainable future success.

With that, we're now pleased to take your questions.

Operator
Thank you, sir. And 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 star followed by the one on your touchtone phone. If you would like to withdraw your question, please press the star followed by the two. We do ask you to limit to one question.

Our first question comes from the line of Steve Byrne with Bank of America. Please proceed with your question.

Steve Byrne
Yes, thank you. You're planning to shutter the refinery at the end of the first quarter, and I know that you have considered some other options for that facility, such as becoming a plastic recycling center. I think you also offered it as a hydrogen hub.

My question for you is, are any of those plans contingent on funding from the DOE, which could potentially get scuttled if there was an administration change? And can you provide a little bit of, I guess, transparency on the two million ton, 1 billion EBITDA target you have by the end of the decade? What type of circular products do you expect to be generating that?

Peter Vanacker
Hi, Steve, thank you very much for your question and warm welcome from my side. On the refinery, we have announced that multiple times and it's again in our prepared remarks that we plan at the latest to run down the refinery at the latest at the end of first quarter 2025.

In the meantime, our teams are making very good progress with regards to a couple of projects that we have alluded to before. One of them is our second investment in MoReTec. The first one, remember, is in the Cologne hub next to our steam crackers in Wesseling. The second one we plan to bring to the Houston refinery. Leveraging upon the hydrotreaters we have, modify those hydrotreaters so we can upgrade the plastic oil that is being produced in MoReTec number two. And that plastic oil would then be supplied to our steam crackers through pipelines in, for example, Channelview. So that's one project that is proceeding well. I hope that we will take a first decision, a first milestone decision on that still this year.

The second project is around the renewable hydrocarbons. So these are not plastic waste type hydrocarbons, but hydrocarbons eventually produced out of used cooking oil or other wastes. We see also opportunities to leverage upon the equipment we have at the refinery to produce those renewable hydrocarbons as a feedstock in our refinery in Houston. And again, the same principle, those hydrocarbons would then go through our pipelines to Channelview, to the steam crackers, and then based upon that, we would crack them and we would polymerize them.

So we have then two elements of our Circulen family. One, the advanced recycling part based upon the MoReTec investment, and the other one, the renew part, which is based upon renewable hydrocarbons. So all that is proceeding well, as we had alluded to in the past.

Michael McMurray
And hey, Steve, it's Michael. I would say that a lot of the hydrogen projects are probably challenged without subsidies. And then before we move on to the next question, I wanted to clarify something. We received a lot of questions around our operating rates this morning from the materials that we had posted online. So let me see if I can clarify a few points for you all.

In April, we guided to second quarter operating rates for the segment as 85% for both O&P Americas and O&P EAI, and 80% for Intermediates and Derivatives. Our rates for the second quarter were largely in line with that guidance.

In the business results discussion posted on our website, we disclosed second quarter cracker operating rates were 95% for O&P Americas and 90% for O&P EAI. We operated our crackers in both regions at higher rates during the second quarter to capture favorable economics for olefins. Our polymer plants operated at lower rates to match second quarter market demand for polymers. As Kim and Aaron mentioned, during the third quarter, we will operate the O&P Americas segment at 85%, O&P EAI at 80%, and I&D at 75%. In O&P Americas, we proactively took some downtime during Hurricane Beryl that will reduce rates by about five percentage points for the third quarter.

In EAI, we are starting a turnaround on our larger cracker in Wesseling during the third quarter. We expect our crackers in both regions will operate at higher rates than the segment to continue to capture attractive margins for ethylene, propylene, and other co-products. In I&D, we are performing a turnaround on one of our older PO/TBA plants in Bayport, Texas during the third quarter. In addition, we're taking some downtime at our POSM joint venture in the Netherlands to balance the low market demand for propylene oxide and styrene in the region.

If you have any further questions on rates, please feel free to reach out to the IR team for further clarification.

Next question.

Operator
Thank you. Our next question comes from the line of Matthew Blair with TPH. Please proceed with your question.

Matthew Blair
Thank you and good morning. I have some questions on the PO side. So, you mentioned the benefits of the new PO/TBA plant in Channelview. Could you give us the approximate EBITDA contribution in the quarter or at least some guidance on how the run rate stacks up to your mid-cycle target of 400 million to 500 million on an annual basis? The release also mentioned some volume improvements in PO. Can you talk about which end markets are picking up? And then finally, can you talk about the supply-demand outlook here? I think there's a fair amount of new China PO capacity on deck for the back half of this year. Thank you.

Peter Vanacker
Thank you, Matthew, and welcome as well to you. On propylene oxide, if you talk about the new facility, the PO/TBA facility, that we have successfully started up last year, I'm very pleased to say that we ran close to 90% during Q2 in terms of capacity utilization. I think, based upon my 34 years in the industry; that's a huge success because that's a major investment that we have made to be able to run pretty much close to nameplate capacity of such a facility and such a relatively short period of time of ramping up.

So with that, I will also hand over to Aaron to give a little bit more background on the market supply and demand.

Aaron Ledet
Yeah, thank you, Peter, and thank you for the question. I would say that as we look at overall PO demand, as many of you know, most of it goes into durable applications with roughly two-thirds going into the polyurethane chain. We have not seen any rebound from durables, at least noticeable rebound from durables over the first part of this year. We don't expect it to rebound either in the second half of the year.

We remain optimistic that the rate cuts will have an impact on us, although they won't be immediate. The other third demand for PO really comes through derivatives and glycols and BDO, and we're also -- while glycols might be a little bit better than what we were anticipating, BDO remains somewhat modest. So generally speaking, PO demand is relatively modest right now.

Peter Vanacker
I do want to add, I mean, just on the big picture, now we've alluded to that in the past as well, one needs to look at the total different capacities to produce propylene oxide, and still in the world, I would say approximately half of the capacities are based upon chlorohydrin technology, which is a technology that is older, has higher CO2 emissions, is more costly.

And actually on January 8, 2024, the China National Development and Reform Commission, the so-called NDRC, announced a ban on most of the chlorohydrin-based PO technology by the end of 2025.

So we estimate about 25% of China propylene oxide is chlorohydrin technology. So if you see that that is going to be banned, and you look at that compared to the additional investments in propylene oxide that have been taking place in China, it's probably going to, these rationalizations will partially offset, if not fully offset, I mean the new capacity in China.

Operator
Thank you. Our next question comes from the line of Frank Mitsch with Fermium Research. Please proceed with your question.

Frank Mitsch
Good morning. I had a question on the cash flow side of things, given the positive cash flow generation and solid balance sheet here, you dipped your toes back into the buyback markets here in the second quarter. Curious what your outlook is for the balance of the year there, and

whether or not, there might be other scope for M&A, etc. So, just generally the uses of cash question. Thank you.

Peter Vanacker
Of course, I'm very pleased to say that the total capital return yield of Q2 was 6%. So I think that's very attractive. Michael, you want to add something on the question of Frank?

Michael McMurray
Yeah. So thanks for the question, Frank. I mean, just a couple of things. I mean, you know that we have a reputation as a company for delivering strong free cash flow and converting EBITDA into cash. In the last 12 months, we generated 4.4 billion, which is 95% conversion, which is well ahead of our 80%.

And just kind of thinking about the year itself, as Peter alluded, we grew our dividend. And we did some buybacks as well in the quarter. As we look to the second half, I think buybacks will continue to be in the mix, probably somewhat modestly, so we're still being a little bit cautious. But from a long-term perspective, the 70% guidance of returning free cash flow to our investors is fully in place, and we're fully committed to it.

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

John Roberts
Thank you. I know Eastman has a very different circular plastics program than Lyondell. But would it seem that their operational initial problems, and they've got some delays in customer adoptions, would that be common, I think, to all circular plastics initiatives here? So is that giving you any concerns about your 2030 targets, 5.5 years from now is actually a pretty short timeframe for chemical investments.

Peter Vanacker
John, welcome as well, and thank you for your question. Of course, technologies are difficult to compare to each other. What I can say on our MoReTec technology, we have a unit which is up and running in our Ferrara plant, where we also have our R&D people in Italy. So that is not an industrial scale plant, but it's not a lab scale either. It's not a small plant. This is about four stories or five, the plant. So we have very good experience with that.

The scope, I mean, on the MoReTec 1 investment has been finalized, and we're starting to prepare the grounds, on the investments. So that is proceeding well in Wesseling, so for our Cologne hub.

Our process is, as I said multiple times, different than practically any other process that you find out there because it is a catalytic process, leveraging upon our vast experience we have in catalysis.

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, in your expectation of higher second half results versus the first half, what are you betting for polyethylene price increases, and included specifically in July as well? Thank you.

Peter Vanacker
Well, David, welcome and thank you for your question as well. I mean, if you look at the first half of this year, from a group perspective, of course, then Q1 was better than Q4 last year. Now Q2 was better than Q1. Quite impressively, I mean, 29% better than Q1.

Another point that I want to make is, if you now exclude the refinery business, which, as we alluded to before in the call, is going to end its operations, it's a different environment in refining than what we have seen last year. So if you compare Q2 results without refining for this year with Q2 results without refining last year, then our results are better than last year. So the core business is improving as we are progressing.

Now to your question on the second half of this year, if you look, I mean, what we alluded to in the prepared remarks, we expect that ethane will remain cheap. There are two $0.05 per pound North American polyethylene price increases in the market. Kim said practically all increased capacity in North America has been absorbed through demand growth as well as exports -- record exports. We don't see any inventory buildup throughout the value chain. And we're only at the beginning of the hurricane season.

So if you look at all these things, then one would expect that we have a very good momentum, and that should support price increases for polyethylene. We will have to see, of course, how much of the two current $0.05 per pound price increases are out there, but at least you see the momentum in the North American market, which should support these price increases.

Operator
Thank you. Our next question comes from the line of Kevin McCarthy with Vertical Research Partners. Please proceed with your question.

Kevin McCarthy
Yes, thank you and good morning. Peter, I appreciate the detail on slide eight regarding your ongoing review of the European asset footprint. Can you provide a little bit more color about how you arrived at these decisions, but perhaps more importantly, you know, which of the three buckets that you outline in terms of upgrading profit, divesting, or rationalizing might be more likely, and what does the timeline look like for the evaluation moving forward?

Peter Vanacker
Thank you very much, Kevin. Good question. Of course, I mean, it's not a lot that in addition that we can disclose at this point in time because we continue to keep all the options open, but as you know, we have made the announcement in the market, so by having made the announcement in the market, that allows us to also have discussions with potential other owners for those assets.

I need to differentiate a little bit, like you saw on slide number eight. One part is around propylene oxide, so the PO/SM units that we have in the Maasvlakte, which is a 50-50 joint venture with Covestro. So that is a bit different, of course, than if you compare, I mean, to the cracker or PE/PP sites that we have identified within the scope.

So, progressing well, I would say, we're not excluding any opportunity that we have at this point in time. And one thing that I can say is, we are very diligent, we're laser focused, and we will not delay the actions that need to be taken.

Operator
Thank you. Our next question comes from the line of Josh Spector with UBS. Please proceed with your question.

Chris Perrella
Good morning, everyone. It's Chris Perrella on for Josh. Taking a look at the second half guidance, the maintenance -- thank you for the updated maintenance schedule, the maintenance looks relatively similar, half over half. I know there's the Beryl impact. Could you

add some more color on sort of the moving parts? Is it a seasonal decline weighing on the earnings in the second half, or what's slowing the momentum that you saw in the second quarter there?

Peter Vanacker
Well, Chris. Thanks. Good question. Well, we continue to see that there is momentum being built up. I talked already a bit on PE, so if you look at PE, you see that just the U.S. domestic demand in Q2 was up by 4% versus Q1. Which, just to remind everybody, this is the strongest quarter since two years. Exports were up, let's say, around 8%, 9% versus May in June; so they were, these exports, about the second highest, I mean, of all time. And I alluded to the price increases that we have in the marketplace.

The same is also a bit valid, I mean, on polypropylene, so demand continues to improve, of course we're still waiting here for inflation rates to go down, we're still waiting as a consequence for interest rates to go down, so that consumer confidence would go up, especially for durable goods. But in polypropylene, we see that even if consumer confidence remains low, that there is a bit of improvements already in some other areas, like rigid packaging, seeds, films. Our order book is also quite full on polyethylene and polypropylene, so we're happy with that as well.

The main issue that continues to be around China. China demand, we have seen slowly going up, we think around 4%, 5% locally, but that is being absorbed with the additional capacity that is coming on stream. Europe continues to be soft, but then there is some encouraging messages, numbers that we see, especially on the southern part of Europe, the southern countries with higher GDP growth, higher demand, and we see that inflation rates continue to slowly go down in Europe as well.

So if you look at everything together, we see a slow continued increase in terms of demand, so if you talk about these capacity utilization percentages, Michael made some clarifications on that. It's not so much, for the second half of the year, that we are worried about demand growth. It's mainly because of our own actions that we have, because if you have a scheduled turnaround on our big cracker like we have in Wesseling in Europe, of course that gives you less capacity that you have available. But rest assured, we continue to see continuous, slow, but good momentum, steady momentum in terms of demand creation.

Michael McMurray
So flattish to Q3, slightly up second half versus first half, and then Chris, you know, that seasonally, the first and fourth quarters tend to be the weakest, with seasonally, the second and third, the strongest, just as a reminder.

Operator
Thank you. Our next question comes from the line of Hassan Ahmed with Alembic Global. Please proceed with your question.

Hassan Ahmed
Morning, Peter. Joined the call late, so apologies if this question's been asked before. But, you know, a question around the I&D side of things. Historically, the EBITDA in that segment used to be quite stable. And then over the last year or two, there was some volatility there as well. And obviously, you guys saw a nice bump up in EBITDA this quarter, partly obviously driven by the oxyfuel side of things. I'm just trying to sort of suss out what, you know, how you guys think about the sustainability of these profitability levels. And historically -- a continuation of the historically sort of steady, eddy nature of this business.

Peter Vanacker
Thank you, Hassan. Thank you for your question. I made a couple of remarks. I mean, it was more around propylene oxide. But maybe I hand over since I have Aaron also in the room here, and he's heading the I&D business, as you know, that he can make a couple of additional comments around the PO, the oxyfuels business.

Aaron Ledet
Yes. Thank you, Peter. I appreciate it. And thanks for the question, Hassan. I'd point to a couple of different things. I agree with your comment about I&D historical earnings being very steady. We sold the EO&D business in the second quarter. So you have to consider removing that from that profile.

However, we've added the PO/TBA facility and we're now operating that facility better than planned rates close to benchmark. As I look forward, given the challenges that we're currently seeing with durable demand, specifically in automotive, housing, and construction, we are optimizing our PO assets according to technology.

We've already talked to the benefit that we see with PO/TBA. And that's why we're running all of those assets close to benchmark with PO/SM assets being more like swing assets to meet supply with demand. And when you're looking specifically at PO/SM, we would actually prioritize our U.S. assets just given our cost position. And that's why the comment that Michael made earlier on PO11 (Maasvlakte) being idled in August, it's reflecting current demand in the region.

That being said, I still expect that I&D remains steady going forward. I mentioned earlier in my answer to the previous question that with interest rates potentially coming down, we do see some potential upside. That's not currently built into our forecast and it won't be immediate, but we do see some potential upside there.

Peter Vanacker
Of course, we're very well positioned because we have that new PO/TBA plans that is running very well. So if durable good demand starts moving up, then we have the capacity available to fulfill the demand.

Operator
Thank you. Our next question comes from the line of Chris Parkinson with Wolfe Research. Please proceed with your question.

Chris Parkinson
Great. Thank you so much. I just want to dive in a little bit more into polypropylene dynamics. I mean, it seems like U.S. suppl is limited towards the end of the decade, but you have seen increases in other regions of the world. So just in terms of how you're thinking about the supply and demand dynamics on that front, as well as your current use of feedstock costs would be particularly helpful to hear you think about the business as we go into ‘25. Thank you so much.

Peter Vanacker
Thank you, Chris. I mean, before I hand over to Kim, let me elaborate also that, despite the fact that durable goods demand is not really yet going up substantially, domestic demand in the United States for polypropylene was up about 5% versus Q1, which means that this is the strongest quarter in polypropylene that we have seen since Q3 2021.

So with that, Kim.

Kim Foley
So, Peter, I guess what I would add to that is when you when you ask about the overall kind of global dynamics, you've seen a lot of growth in polypropylene, specifically in China, over the last couple years. So what you're seeing play out is more of a regional market, it's much less of an export market than what you see in polyethylene. Just to compare and contrast, for

polypropylene, you may export 8% to 10% in the U.S. versus polyethylene, where it would be more like 40% or 50%.

So it's a much more regional dynamic, and that dynamic is based on the feedstock to your question around feedstocks. So what is your cost of propylene in different parts of the world, whether you're getting it from refining, whether you're getting it from on purpose PDH units. And then the thing that's really an interesting dynamic in North America, specifically right now is the reliability of that supply of propylene.

There's been a lot of PDH capacity that's been brought online, as people have been phasing out propylene coming out of olefins crackers as they've gone to lighter ethane feedstocks. So you see on purpose PDH having reliability problems, and you're seeing is what we would call propylene grade polymer causing the problems. So I hope that answers your question.

Chris Parkinson
All good. Thank you so much.

Peter Vanacker
And Chris, we also have a spread improvement price increase. I mean, that is on the table in the market for North America for July of $0.03 per pound on polypropylene.

Chris Parkinson
I saw. Thank you.

Operator
Thank you. Our last question comes to the line of Vincent Andrews with Morgan Stanley. Please proceed with your question.

Turner Hinrichs
Hi, this is Turner Hinrichs on for Vincent. It looks like in EAI, you ran at 60% naphtha when I think you can run typically with more propane. Was that because there were attractive naphtha co-product values or something else?

Peter Vanacker
Kim.

Kim Foley
The simple answer is yes. There were very good co-product values, especially in butadiene, as well as we felt that that was the best optimization of our European crackers at the time. As we've said in the past, and we'll just reiterate it because I think it's very important; whether it's in Europe or in the U.S., we are always looking week to week to optimize the feedstock slate of our crackers and produce the best value for LYB. It's not always ethylene. Sometimes it's the co-product.

Operator
Thank you. We have reached the end of the question-and-answer session. I'll turn back over to Mr. Vanacker for closing comments.

Peter Vanacker
Yes, thank you very much. Excuse me. Thank you again for all of the thoughtful questions. Let me maybe still articulate a couple of key messages of this call. I believe that we are making excellent progress on our strategy to make LYB a much more focused company with a leading advantaged asset portfolio, as well as product mix. And why am I saying that?

I mean, first of all, we're making good progress on our goal to add $3 billion in incremental normalized EBITDA by 2027. Secondly, you see that we have clear actions to increase our historical average EBITDA margin from 18% to above 22% percent. Third, our second quarter due to capital return yield at 6% that we have due to an increased dividend and also some share buybacks is, I think, quite state-of-the-art.

And fourth, our current cost advantaged operations in feedstock advantaged regions without our refining is already about 60% of LyondellBasell's production volume. And after we have implemented our European strategic assessment, we expect that that will grow to around 70%. So let's say in a couple of years.

So, of course, we look forward to sharing updates over the coming months as we continue to make progress on all aspects of our long-term strategy. We hope you all have a great weekend. Stay well, stay healthy and stay safe. Thank you very much.

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