

LyondellBasell
2Q23 Earnings Call
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Presenters

Peter Vanacker, Chief Executive Officer

Michael McMurray, Executive Vice President & Chief Financial Officer

Ken Lane, Executive Vice President, Global Olefins & Polyolefins

Kim Foley, Executive Vice President, Intermediates & Derivatives and Refining

Torkel Rhenman, Executive Vice President, Advanced Polymer Solutions

David Kinney, Head of Investor Relations

Q&A Participants

Aleksey Yefremov - KeyBanc Capital Markets

Arun Viswanathan - RBC Capital Markets

Christopher Parkinson - Mizuho

Frank Mitsch - Fermium Research

Hassan Ahmed - Alembic Global

Jeff Zekauskas - J.P. Morgan

Matthew Blair - TPH

Mike Leithead - Barclays

Steve Byrne - Bank of America

Steve Richardson - Evercore ISI

John Roberts - Credit Suisse

Duffy Fischer - Goldman Sachs

Vincent Andrews - Morgan Stanley

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 call 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 is available on our website at www.lyondellbasell.com/investorrelations.

Today, we will be discussing 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 p.m. Eastern time today until September 4, by calling (877) 660-6853 in the United States and (201) 612-7415 outside the United States. The access code for both numbers is 13739183.

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 & Polyolefins; Kim Foley, our EVP of Intermediates and Derivatives and Refining; and Torkel Rhenman, our EVP for Advanced Polymer Solutions. During today's call, we will focus on second quarter results, current market dynamics, our near-term outlook, and our long-term strategy. With that being said, I would now like to turn the call over to Peter.

Peter Vanacker

Thank you, David, and welcome to all of you. We appreciate you joining us today as we discuss our second quarter 2023 results. Starting with Slide 3. During today's call, we will discuss the resilient results that our team delivered during the challenging marketing conditions of the second quarter. And we will also provide an overview of our outlook for the second half of this year, as well as our plans to optimize our advantaged positions to navigate volatile markets and feedstock costs.

But first, let's take a few moments to review LyondellBasell's foundations and the progress we have made with our long-term strategy. Let's turn to Slide 4 and begin the discussion with our foundational commitment to leadership and safety performance. Our team continues to deliver outstanding safety results. LyondellBasell's year-to-date incident rate for employees and contractors is 0.15.

While slightly higher than our results for 2022, our focus on safety continues to deliver performance that exceeds the top 75th percentile for our industry. Our leading safety results produce benefits that are reflected in our operations and ultimately, in our financial performance. Safety is a fundamental part of our core values, and it will continue to be a critical enabler for our strategy and our future success.

Let's turn to Slide 5 and review the progress on our long-term strategy. As we shared during our Capital Markets Day in March, our strategy is built around three pillars -- grow and upgrade the core; build a profitable, circular, and low-carbon solutions business; and

step up performance and culture. We are confident we have the right strategy, and we are not allowing current business conditions to slow our progress.

Let me highlight some of our actions on these pillars over the past few months. Our value enhancement program is providing benefits for two of the pillars in our strategy. The VEP is generating volume growth as part of grow and upgrade the core and margin improvement captured within step up performance and culture. I am pleased to see the rapid progress and execution of these VEP initiatives.

We are raising our 2023 VEP target for year-end annual recurring EBITDA run rate by \$50 million, to \$200 million based on mid-cycle margins to reflect our accelerated progress. I will provide more details on this progress in a few minutes. In grow and upgrade the core, we are investing in our business that fits with our long-term strategy. Last quarter, we announced a successful start-up of our new PO/TBA facility, the largest propylene oxide plant in the world.

This quarter, our team successfully completed technology performance tests to prove out the full capacity of the new facility. We're also managing our portfolio to ensure that all businesses are aligned with our long-term strategy. In May, we announced that we are extending our refining operations to no later than the first quarter of 2025. Let me be clear, we have not changed our decision to exit the refining business. The extension of operations will allow us to develop options to redeploy the site's workforce and assets in support of the company's sustainable growth strategy.

Now let's turn to the second pillar of our strategy. We're committed to building a profitable, circular, and low-carbon solutions business to drive our leadership in circularity and address the massive demand for these products from our customers and society. We expect this business will generate at least \$0.5 billion of incremental EBITDA by 2027 and \$1 billion of incremental EBITDA by 2030.

Through multiple acquisitions, partnerships and other arrangements, we are building a comprehensive business model with powerful, competitive advantages that come from new technologies, upstream sources of recycled and renewable feedstocks, and downstream relationships with our customers and brand owners.

The third pillar of our strategy is to step up our performance and culture. Last October, we streamlined our organizational structure to improve our line of sight with clear accountabilities and improved alignment across our commercial and manufacturing functions. We're leveraging the structure of our VEP to drive commercial excellence and improve our customer focus. And Torkel and his team are making solid progress on transforming the performance of our Advanced Polymer Solutions segment.

Altogether, the three pillars of LyondellBasell's strategy are working side by side to provide focus and alignment to drive our progress in capturing value and delivering a

more profitable and sustainable growth engine for LyondellBasell. Let's turn to Slide 6 and take a closer look at our approach to establishing leadership in circular solutions. As Yvonne stated at our Capital Markets Day in March, our circular and low-carbon solutions business is taking a differentiated approach by gaining advantage in three key areas -- technologies, feedstocks, and downstream customer relationships. We believe that our comprehensive strategy based on regional hubs will establish LyondellBasell as the leader in sustainable solutions.

We're expanding our participation further up and down the plastic waste value chain to both gain scale and maximize the returns of various waste streams around the world. Today, our team is building supply chains to bring waste feedstocks into our existing facilities and driving innovation through investments in new technologies. As you saw on the previous slide, we are investing in both internal and external technologies, such as LyondellBasell's proprietary MoReTec advanced recycling process, as well as Pryme's pyrolysis process and LMF Nord's mechanical recycling.

In line with our sustainability goals, we are advancing our carbon reduction initiatives through partnerships. In June, we signed an MOU with Technip and Chevron Phillips to develop an electric cracker demonstration unit in Channelview, Texas. We have completed our purchase agreements to support the development and procurement of renewable power for LyondellBasell's locations around the world. These partnerships utilize the unique strengths of each party to deliver superior results with a common goal, reducing the carbon intensity of our products to increase the value of our products for our customers.

And we are leveraging the unique capabilities of our APS segment to upgrade our mechanical recycling portfolio while offering tailored solutions for our customers. Most importantly, we are building a business that provides these solutions at scale. Step by step, we are making progress toward our 2030 goal to sell 2 million tons of recycled or renewable-based polymers annually. Since 2019, we have produced and marketed approximately 220,000 tons of these polymers. LyondellBasell's differentiated approach uniquely positions us to unlock significant value as we address the needs of our customers and society.

On Slide 7, we ask that you save the date for a webinar on September 26, with Jim Seward, EVP and Chief Innovation Officer; and Yvonne van der Laan, EVP of Circular and Low-Carbon Solutions, will share more details on our MoReTec technology and our circular and low-carbon solutions business. We hope that you can join us virtually.

Let's turn to Slide 8 and discuss this year's updated target for our value enhancement program. Our company has a well-earned reputation for strong, operational excellence and cost leadership. Our goal is to build on these strengths to capture untapped value across the company through modest investments. Since the launch of our VEP, we have inspired a more agile and entrepreneurial mindset throughout our workforce.

When we launched the value enhancement program last year, we announced targets to deliver recurring, annual EBITDA improvements, run rates of \$150 million by the end of 2023, and \$750 million by the end of 2025. Our team is progressing ahead of plan for 2023. As we expanded the VEP to Europe and smaller U.S. sites during the first and second quarter, we found the enthusiasm and energy gaining momentum. We now think our recurring annual EBITDA improvement will reach a run rate of at least \$200 million by the end of 2023.

Let's get a bit more specific about a few of these VEP initiatives on Slide 9. At our low-density polyethylene manufacturing facilities in Clinton, Iowa, our team faced recurring reliability challenges related to valve controllers. With an investment of approximately \$60,000, our team was able to upgrade the controllers and unlock more than \$400,000 of annual value. The project was executed during a planned outage, with VEP providing the resources required to rapidly resolve this chronic issue.

A modest investment across our global engineering and procurement teams unlocked an opportunity to expand the supplier pool for electric motors at our manufacturing sites. We expect a direct annual cost benefit of \$400,000, as well as an improvement in the security of our supply for these critical motors. These benefits will be realized with a total resource investment of only \$70,000 over the next three years.

At our Channelview facility, we invested the engineering resources required to implement a new process control scheme to improve yields and decrease energy consumption and distillation towers. Through better steam control and increased butadiene yields, we will realize \$1.4 million in annual value at a onetime cost of \$50,000. In addition to the direct financial benefits, this project supports our sustainability goals by reducing CO2 emissions by over nine kilotons.

One of our larger VEP initiatives will install a filtration system to remove solids from a byproduct stream at our olefins plant in Channelview. By upgrading the byproducts, we anticipate over \$5.1 million in recurring annual EBITDA improvement from higher margins and increased utilization through a modest \$550,000 investment.

These examples are representative of the hundreds of initiatives in our VEP portfolio. The average annual benefit of our initiative is less than \$1 million. But the program is supported by rigorous economic analysis, diligent tracking, and an evergreen process. The value enhancement program has been the catalyst within our organization to rapidly implement good ideas to create value. We look forward to providing you with regular updates on our progress as these initiatives become more prominent in our results.

Let's turn to Slide 10 and focus on our financial results for the second quarter. During the second quarter, LyondellBasell's businesses delivered resilient results and strong cash generation, despite challenging market conditions. Earnings were \$2.44 per share.

EBITDA was \$1.5 billion. At the end of the quarter, our cash on hand was \$2.5 billion, with \$6.6 billion of available liquidity.

Now let me turn the call over to Michael first, and then to each of our business leaders, who will describe our financial and segment results in more detail.

Michael McMurray

Thank you, Peter, and good morning, everyone. Please turn to Slide 11 and let me begin by describing how we are extending our track record of outstanding cash conversion. During the past four quarters, LyondellBasell generated \$4.8 billion of cash from operating activities. Our cash balance was \$2.5 billion at the end of the second quarter. Our team efficiently converted 103% of our EBITDA into cash over the last 12 months.

Let's continue with Slide 12 and review the details of our cash allocation during the second quarter. The LyondellBasell team remains committed to our balanced capital allocation strategy, while providing strong returns for our shareholders. During the second quarter, our portfolio of businesses generated \$1.3 billion in cash from operating activities. Our robust cash generation comfortably covered our capital expenditures of approximately \$300 million, as well as our \$508 million of returns to shareholders through dividends and share repurchases.

During the quarter, we increased our quarterly dividend by 5%, to \$1.25 per share. 2023 will mark our 13th consecutive year of annual dividend growth. In May, we issued our first green bond to support investments that advance our strategy for leadership in sustainability. After the start-up of our new PO/TBA facilities in the first quarter, we successfully demonstrated full operating rates on these assets. Our capital expenditures are now focused on continued investments in maintenance and smaller growth projects.

With the rapid progress in the value enhancement program and the extension of operations at our refinery, we expect capital expenditures for 2023 will increase to \$1.7 billion, \$100 million higher than our original guidance of \$1.6 billion. During the third quarter, we expect operating rates of 85% for our North American olefins and polyolefin assets, 75% for our European olefins and polyolefins and intermediates and derivative assets, and just below 95% for our refinery.

In the appendix of the slide deck, we provide updated 2023 modeling guidance, CapEx and several other items, including refresh estimates on cost and capital expenditures associated with extending the operations at our refining business. Now I'd like to provide an overview of the results from each of our segments on Slide 13. The LyondellBasell's business portfolio delivered \$1.5 billion of EBITDA during the second quarter.

Our results reflect modest improvements in O&P margins and higher I&D volumes, offset by weaker refining margins. Results in our olefins and polyolefins businesses benefited from lower feedstock costs. Demand for oxyfuels remained strong, while margins in our

refining business declined due to lower refining crack spreads. With that, I'll turn the call over to Ken.

Ken Lane

Thank you, Michael. Let's begin the segment discussions on Slide 14, with the performance of our Olefins and Polyolefins Americas segment. During the second quarter, O&P Americas EBITDA increased \$138 million, to \$679 million. North American integrated polyethylene margins increased on higher U.S. sales prices and lower ethane costs, while weak demand for durable goods continued to impact polypropylene margins.

In the third quarter, we expect volatile feedstock costs and new capacity entering the market will compress margins. Also, demand is being impacted by cautious buying by our customers due to the uncertain economic outlook. As Peter mentioned, we are not allowing current business conditions to slow our progress on strategy. On June 1, we announced an MOU with Technip and Chevron Phillips to develop an electric furnace demonstration unit at our Channelview, Texas site.

The technology could enable the company to use renewable electricity as a heat source for ethylene cracking and significantly reduce the greenhouse gas footprint of our olefins production. This collaboration is just one of many initiatives underway to build a profitable, circular, and low-carbon solutions business for LyondellBasell.

Please turn to Slide 15 as we review the performance of our Olefins and Polyolefins Europe, Asia and International segment. In the second quarter, European ethylene margins benefited from lower feedstock costs, but this was offset by weak demand for polymers used in durable products. As a result, O&P EAI second quarter EBITDA increased \$7 million, to \$84 million. Looking ahead, we expect the European and Asian markets to remain challenging, with consumer uncertainty and energy cost volatility.

Slow economic recovery, combined with additional supply in China will continue to be a headwind. Finally, we are growing our portfolio of recycled and renewable based polymers from consolidating our ownership in QCP mechanical recycling, investing in Pryme's plastic waste pyrolysis process, and building a flexible packaging recycling facility through LMF Nord, our CLCS team continues to build out our regional hub model to advance our leadership in circular and renewable solutions.

Having said that, I want to emphasize the focus our team has on generating value and cash from operations. Our team is highly seasoned and is doing a great job at both. I want to be sure and acknowledge all of their hard work. Now I'll turn the call over to Kim.

Kim Foley

Thank you, Ken. Please turn to Slide 16 as we look at the Intermediates and Derivatives segment. EBITDA for the segment increased \$46 million in the second quarter, to \$472 million. Additional capacity from our new propylene oxide facility was largely offset by

planned maintenance downtime. Propylene oxide and derivative margins decreased on continued, weak demand for durable goods. Demand for oxyfuels remains strong when margins were slightly lower.

In line with the guidance from the beginning of the year, we are conducting planned maintenance during the third quarter on two of our existing propylene oxide assets. We expect to run our global I&D assets at approximately 75% of capacity in the third quarter, which includes the idling of two PO/SM assets in the U.S. and Europe for approximately two months at each asset.

In the second half of the year, we expect oxyfuel margins to compress, as cost seasonally increase for butane, our key, raw material. Last quarter, we discussed the successful start-up of our new PO/TBA plant. This quarter, I'm pleased to report that we have completed the technology performance test to prove out the full capacity of our new PO/TBA facilities. I am incredibly proud of what our team has accomplished to quickly reach these milestones.

Now let's turn to Slide 17 and discuss the results of the Refining segment. The second quarter EBITDA declined by approximately \$200 million to \$114 million, as the benchmark Maya 2-1-1 crack spreads fell by more than \$9 a barrel, relative to the first quarter. Spreads for other heavy crude oil run at our refinery, such as the Canadian WCS, declined further than Maya, providing additional headwinds to our margins.

In the near term, we expect demand for refined products to remain stable and inventories to remain low. The recent elevation of crack spreads will likely moderate as outages in the refining industry are resolved. Nonetheless, we expect Maya 2-1-1 spreads to remain above historical averages. In the third quarter, we plan to operate the refinery at approximately 93% of capacity. This rate provides optimal economics for our asset, based on our plans for crudes, products and operations ahead of our maintenance work.

We remain committed to the safe operation of these assets, with a focus on high reliability. In the fourth quarter, we are planning for FCC maintenance, with an estimated EBITDA impact of \$25 million. We are extending operations at our refinery to no later than the first quarter of 2025. This extension will help to bridge activities at the site, as we develop new projects to transform -- site in support of our circular and low-carbon solution growth strategy.

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

Torkel Rhenman

Thank you, Kim. Let's review the second quarter results for the Advanced Polymer Solutions segment on Slide 18. Second quarter EBITDA moderately increased to \$34 million. Margins for the polypropylene company business increased as product prices improved and energy costs decreased. We saw lower demand from the construction and

electronics markets, while demand from the automotive markets gained momentum during the quarter.

We expect demand in the third quarter to be similar to the second quarter across most APS businesses. Typical third quarter downtime at OEMs will offset some of the automotive production gains we have seen in the first half of 2023 in Europe and North America. Our number one priority in APS is to restore service levels to our customers and restore growth in the business.

I'm happy to report that we have restored our service levels, and we're making good progress in refilling our growth pipeline. APS has a lot of project-based business, and our growth pipeline depends on winning a spot on the next automotive platform launch with the next color design.

One KPI that we track is the number of color and concentrate requests we service. In Europe, the number of requests increased by more than 50% by the end of the second quarter, relative to our performance in the second half of 2022.

We still have a long path to complete our transformation, but our team is making tangible progress in delivering improved results. In early July, we completed our acquisition of the Mepol Group, a manufacturer of recycled, high-performing technical compounds located in Italy and Poland. Mepol's expertise in sustainable compounding fits perfectly into our strategy to be the leader in providing sustainable solutions for our customers. With that, I will turn the call back to Peter.

Peter Vanacker

Thank you, Torkel. Please turn to Slide 19, and I will discuss the results for the Technology segments on behalf of Jim Seward. Second quarter EBITDA of \$79 million reflected higher licensing revenue and lower catalyst volumes. In the third quarter, we expect that licensing revenue and catalyst volumes will moderately improve. As a result, we estimate that the third quarter Technology segment results will be similar to the quarterly results seen in the first three quarters of 2022.

As discussed in the previous earnings call, we expect that LyondellBasell's proprietary MoReTec advanced catalytic recycling technology will be a key enabler for scaling up our circular and low-carbon solutions business. Engineering work for our first commercial scale plant in Cologne, Germany is underway. We hope to provide you with further updates and announce an investment decision for a commercial scale plant during the fourth quarter of this year.

Please turn to Slide 20 and I will discuss the market outlook, by regions and end markets. As you heard from our business leaders, we expect that the challenging market conditions of the second quarter will continue for the remainder of the year. And the America's fundamental demand is tepid, and we see cautious buying from our customers and

consumers. Margins are expected to be pressured by near-term volatility in feedstock costs and new capacity.

The potential for energy cost volatility and associated consumer caution looms over the European markets, despite moderation in feedstock and energy costs relative to 2022. In China, strength in consumer services has not been sufficient to offset slow recovery in durable goods, infrastructure and export activity. Markets are not reflecting much benefit from the initial stimulus measures. Demand for consumer packaging is stable, supported by the service industries. However, our customers continue to keep their inventory levels cautiously low.

Building and construction markets are relatively flat, with benefits from new housing starts, offset by reduced sales and maintenance for existing homes as owners resist trading into higher mortgage rates. We're watchful for tailwinds in the United States from stimulus enabled by the Inflation Reduction Act, the Bipartisan Infrastructure Law, and the CHIPS and Science Act.

Demand from automotive market seems to be gaining momentum. However, there may be some headwinds from the typical downtime at OEMs in the third quarter. Oxyfuels and refining markets continue to see stable demand as refined product inventories remain low. At LyondellBasell, we optimize our well-positioned assets across the world. We will continue to align our operating rates with market demand and steer through all stages of the business cycle.

Now let me summarize our second quarter outlook and our long-term strategy for our company, with Slide 21. Our second quarter results illustrate how our team is capturing value to our new strategy, despite challenging markets. Margins for our O&P businesses moderately improved amid tepid demand. Although lower than the first quarter, our oxyfuels and refining margins remained above historical averages, supported by low inventories and steady demand.

Cash generation in the second quarter was outstanding, with \$1.3 billion in cash from operations, and an impressive cash conversion of 103% over the past four quarters. We returned \$508 million in dividends and share repurchases, demonstrating our commitment to shareholder returns. Looking ahead to the third quarter, we anticipate soft demands and additional polyolefins capacity in North America and Asia will lead to further margin compression.

We expect LyondellBasell's third quarter EBITDA will be mid-teens to mid-20 percentage points lower than the second quarter. We remain watchful for near-term risks and opportunities across sectors and geographies. At our Capital Markets Day in March, we shared our excitement around our new forward strategy. And during the call today, we provided updates on our progress to capture incremental value across the three pillars of the strategy.

I want to emphasize that we are not allowing current conditions to slow us down. Our value enhancement program has generated incredible energy and enthusiasm across our workforce, from frontline operators and manufacturing to engineers developing innovative solutions to sales and support teams serving our customers around the world. LyondellBasell VEP is unlocking value at an accelerating pace.

We're making steady progress on our goal to deliver a more profitable and sustainable growth engine for LyondellBasell. 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 2. We do ask to limit to one question.

Our first question comes from the line of Christopher Parkinson with Mizuho. Please proceed with your question.

Christopher Parkinson

Great. Thank you so much. Good morning, everyone. Just taking a step back on Slide 14. You had a pretty solid 2Q in the Americas. But at the same time, as you've been consistently highlighting, there's been a lot of volatility in NGL pricing, there's going to be a difference in operating rates in the second half.

There's a little bit of a choppy macro picture. Just when we're thinking about integrated olefin margins, just how should we be thinking about the run rate for the second half and into 2024, just when you're taking a look at the current dynamics? And then any comments on how you expect this to eventually inflect and improve, hopefully, next year. Thank you so much.

Ken Lane

Yes, Chris, thanks for the question. Like we have said in the remarks that we made, we do expect it to be volatile. So the good news is we've seen NGL prices come down. That was really peaking in July, but we do see that coming off here in August, but it did have an impact in July. That's not going to continue.

The inventory levels for NGLs are still very healthy and production is growing. So overall, we expect that we're going to see advantages with NGL production here in the U.S., especially with ethane. Now having said that, we still do have a lot of new supply that's coming into the market. And at the end of the second quarter, we saw prices in the Americas coming down and that's going to continue into the third quarter, let's say, it's going to carry into the third quarter.

We've seen some green shoots in the export market. So I think we're kind of bouncing along the bottom here. But it's just going to support that theme of continued volatility, going forward. What I would expect is that we're going to see that normal seasonality going into the fourth quarter, some weakness on volumes. Q1 will typically be a little bit better. And then when we get into the second half of next year is when I expect to start to see things really improve.

Operator

Our next question comes from the line of Duffy Fischer with Goldman Sachs.

Duffy Fischer

Yeah, good morning, guys. Question around the export split versus sales in North America. So if you would -- maybe three parts. So where are you guys on that split? Where do you think the U.S. industry is, and then when you think about the three plants that are going to start up or are in the process of starting up, where do you think their split will be in their first year of operations?

Peter Vanacker

That's a very good question, Duffy. Let me hand it over to Ken on the olefins and polyolefins side.

Ken Lane

Hi, Duffy. Yes, so listen, we have traditionally been lower, in terms of a percentage for exports in our portfolio, and you see that this year. Now some of that, as well, is driven by the turnaround that we've had in the first half of the year. We've got some of our capacity down right now in the Midwest. So we've been a little bit lower on the export sales in the first half of the year.

As an industry, the Americas or the U.S. typically is exporting somewhere around 35% to 40% of the capacity. Normally, when these new assets come online, you're looking at them exporting significantly above that level for the first year or so, as they work their way into the market. But I don't see any change, in the midterm, around the industry being at that 40% level of exports. But it's always our goal to find the highest value for our products. And that is in the domestic market.

So our focus is on serving the customers here and building out a portfolio that is more resilient by supplying domestic.

Operator

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

Steve Byrne

Yes, thank you. This e-cracker concept that you're pursuing, is that fair to assume that this would require a complete rebuild and not a retrofit? And if so, how do you look at the economics of that approach versus the multiple hydro treaters that you have at your refinery, that you could produce renewable naphtha, particularly if the DOE goes along with your hydrogen hub proposal?

Peter Vanacker

Thank you, Steve. Very good question that you're asking. I mean, what we are doing here, together with our partners is, first of all, developing the technology further into, let's call it, a semi-industrial scale. So this is not replacing, but it is feeding into a cracker. Next to that, of course, we are following different other avenues in order to prepare ourselves, I mean, for more renewable hydrocarbons.

And here, that's what we are looking at, at the refinery, and how can we leverage upon the hydrotreaters and hydro crackers that we have. So there will not be one solution fits all, is the key message. But we are playing, let's say, very broadly, being technology agnostic, and investing in the different types of technologies that eventually, where we then would decide, I mean, to invest in those technologies on an industrial scale, we're talking about 2030-plus, in my view. Then, of course, there can be different solutions, depending on where you are in the world.

Operator

Thank you. Our next question comes from the line of Steve Richardson with Evercore ISI. Please proceed with your question.

Steve Richardson

Thank you. Good morning. I was going to ask on APS, Torkel, I appreciate the update. I was wondering if you could maybe remind us of some of your longer-term goals, in terms of restoring profitability? It sounds like you're making some good inroads. And then also I was wondering if you could talk a little bit about more if acquisitions should be expected to be a persistent part of the outlook there or if this is something unique? Thank you.

Torkel Rhenman

Thank you. So as we communicated, our target is to get the business to what we believe is very feasible, it would \$0.5 billion earnings by 2027. And that's the plan that we have embarked on. And I have to say, we are, at the current moment, right as I expect us to be. I've led multiple business transformations, and this is where I expect us to be at this time.

So if you look at our earnings performance, I think fourth quarter of last year was the bottom. And we have then two months behind us where we are gradually improving it. But it is a multi-year effort for us, and we're feeling the growth pipeline, as I mentioned, is

our number one priority, and we're making good progress, but that also takes time. But it is our focus.

In terms of acquisitions, the Mepol, I think, was an acquisition that perfectly fit in. But there is nothing else that we have that we are in that sort of category for our space, at the moment.

Peter Vanacker

And here -- it's Peter. I mean, just to add to that, I mean, in terms of the acquisitions, I mean, one needs to look at the Mepol acquisition, being at the boundary, the interface between circular and low-carbon solutions, and then, the APS business with the compounding. So Mepol has a very strong mechanical recycling position in those different markets. And that's what made it so attractive for us to do that acquisition.

Operator

Our next question comes from the line of Arun Viswanathan with RBC Capital Markets. Please proceed with your question.

Arun Viswanathan

Great. Thanks for taking my question. Just wanted to follow up on your outlook for O&P margins across both North America and EIA. So it calls -- it looks like you're calling for double-digit declines in your profitability in Q3, sequentially from Q2. Can you just walk us through some of those mechanics?

I know that we had the \$0.03 decline in June on polyethylene. Are you looking for further declines in Q3? And just wondering, given the feedstock volatility there, as well and then the recent decline in ethane prices, or is it continued weakness in volume? Or is it a little bit of both? Or maybe just walk us through some of the mechanics? Thanks.

Peter Vanacker

Yes. Maybe first of all, let me repeat what has been said in the prepared remarks, is that we have an outlook, I mean, for Q3, which we believe will be mid sin -- mid-double digits, so mid-teens to mid-20s, lower in terms of EBITDA compared to mid -- to Q2. And why that relatively broad range still, because as you know, I mean, we have a very broad portfolio of different products.

And we've seen a bit of improvements in the refinery markets. On the one hand side, we continue to believe, I mean, that we will have strong oxyfuel margins, as Kim mentioned in the prepared remarks. But then, of course, I mean, with the volatility that you see in the olefins and polyolefins markets, and then China still not being back as it should be at this point in time right now.

So we will then, of course, fine-tune that towards -- more at the end of the quarter, when you, Michael, will speak on a conference, and then we'll give a further update on where

we are standing, I mean, in that quarter. So with that, I mean, on the O&P maybe answer that question as well. I mean, Ken, if you can give some additional?

Ken Lane

Yes, like I had said previously, we're looking at the feedstock kind of peaked in July. So that definitely is going to hurt us versus Q2, if you think about it sequentially. Also, like I said, with prices coming down in the U.S. at the end of Q2, that's carried into Q3, so both of those are going to be headwinds.

Then there is some volume component to that. Q2 is normally our peak volume, in terms of seasonality. And in Q3, especially in Europe, in the summer months, you start to see the volume slow down. So we will have some volume slowdown in Q3, as well. Overall, I expect that we are, like I said, bumping along here on margins in Q3, in terms of being at the bottom.

Michael McMurray

And then what I would remind investors is that the fourth quarter is typically seasonally weak to the third. Just as a reminder.

Ken Lane

Yep.

Operator

Thank you. Our next question comes from the line of Aleksey Yefremov with KeyBanc Capital Markets. Please proceed with your question.

Aleksey Yefremov

Thanks. Good morning. Government in China recently included the plastics industry, specifically, in their economic support program, just very recently. Do you have any insight into how the support actually is implemented in practice? It sounds like you haven't seen much benefit so far. But just any color on the specific program maybe that you have would be helpful.

Peter Vanacker

Yes, Aleksey, I mean, we have seen a couple of areas where that eventually could have an impact. But at this point in time, it's too premature to say, I mean, how much that impact will be. Our people, as you know, they are on the ground, I mean, following that. There seems to be talks around, I mean, automotive industry, talks about white goods industry. But too premature, I mean, to say.

Because we need -- we've seen a couple of these initiatives so far, but we are rather a bit in a wait-and-see position now and ready. I mean, if the market would see, I mean, an uptick, because all the initiatives so far have not had the impact as we would have hoped,

despite the fact, I mean, that the saving rates of individuals is extremely high, I mean, 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

Hey, good morning, everyone. I had a question on I&D. You noted in your slides that you're anticipating a \$20 million headwind in 3Q from turnarounds, but also, you indicated that you're shutting down two PO/SM plants, for both the months of July and August. I assume that that's not included in that guide.

So I'm just curious what sort of financial impact we should be anticipating with the shutdowns of the PO/SM facilities? And are you awaiting a return in demand before you bring those facilities back up? Any more color there would be very helpful. Thank you.

Peter Vanacker

Yes. Very good question, Frank. And of course, I mean, like we have done last year, as well, we don't call this, let's say, cost savings, but I mean, we call this, I mean, we look at what is happening in the marketplace. You know, that with our PO/TBA capacities, and especially the new one that we have started up successfully.

We have the lowest cost and also lowest carbon footprints, propylene upsides in the world. So it's clear, I mean, that the PO/SM facilities are more kind of playing a role of a swing capacity. With that, I will hand over to Kim to give more details.

Kim Foley

Thank you, Frank. Thank you, Peter. Let me just add a little bit more color. As Peter alluded to, when we provide the guidance, the guidance was really to help investors understand the difference of bringing on this new PO/TBA capacity, and relative to the other capacity that we would be taking offline for maintenance. And we really looked at that, from the PO/TBA technology, so that you can see both the PO impacts, as well as the oxyfuel impacts, because they're almost offsetting, which is what you see in the guidelines. We talked about a 50% run rate for the new plant versus the maintenance of the other assets.

So when you ask about what's the impact of the PO/SM market or assets going down, I think the way to think about it is where is styrene today? Styrene is oversupplied, it's changing month-to-month on very, very thin margins. So what -- how I would answer your question, Frank, is I don't think there is an impact, based on PO demand, of those plants idling at this point in time, based on the durable demand for polyurethanes, regionally, as well as globally.

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. Question -- within your wide range of EBITDA guidance, you have sort of a single point targets for operating rates. So I'm just wondering how you're thinking about operating rates, given they fluctuated a fair amount, and a lot more than normal over the past 12 months? And so what are you solving for, with those operating rates, versus the profitability you're seeing?

Michael McMurray

It's pretty simple, Vincent. We're matching supply to demand. I wouldn't say it any other way.

Operator

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

Mike Leithead

Great. Thanks. Good morning, guys. Question on O&P EAI -- historically, if I look back, this business did about \$1 billion or more of annual EBITDA. And now it seems like profitability is likely going to be a bit below that for some time, just given energy dynamics and some of the new supply that's coming on in Asia. So just, if we take a step back, how are you thinking, long term, about the competitiveness and profitability of your assets there?

Peter Vanacker

Yes, Ken, I mean, if you can take that question?

Ken Lane

Yes. So listen, of course, unfortunately to the headwinds in the European market, with energy, like everybody else has. And we're focused on generating the highest value from those assets, because there are things that we can do through our VEP program that still does generate good value, from a margin standpoint. We've seen probably the biggest headwind in Europe around demand. So volume is down pretty significantly year-over-year.

As you can imagine, the whole inflation equation has hit the consumer very hard in Europe. So we believe we've got good competitive assets there. But of course, we're operating in a very difficult market. We're going to look for ways to continue to improve the value that we can get from those assets. In the longer term, we're always looking at our portfolio, and we'll continue to do so and make sure that we have the most competitive

position that we can, with reasonable amounts of capital that we would have to deploy there.

Operator

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

Matthew Blair

Good morning. Thanks for taking my question. I had a question on, just the longer-term PE outlook. Some of the consultants are showing global capacity growth in about the 2.5% range for 2024 through 2026, which, as you know, is about half of what we've seen recently.

And so my question is, do you -- what are your expectations? Do you believe this forecast? Do you think this number will creep up? Or is it too late to really see any meaningful increase in, like the 2024 and 2025 numbers, specifically? Thanks.

Peter Vanacker

Well, Matthew, I mean, normally, you have quite a good visibility, I mean, with the announcements of capacity increases. So -- and that visibility in our industry is normally around -- what? -- four, five years, I mean, down the road. I would be very surprised, I mean, if there would suddenly be additional capacities that come on stream, I mean, within that period that have not been announced, because that's not how the industry is working. I mean, Ken, with regards, I mean, to the announcements now, as to the supply and demand.

Ken Lane

The only thing I would add to that, Peter, is we have seen some projects starting to slow down. Right? So we are hearing about that in the market. And look, I'll remind you, too, we always get into these down cycles, and it happens every time. And it feels like you're going to be here forever. But there will be capacity that also comes out of the market.

So yes, there are some additions that are going to come. And some of those are going to make sense, depending on their feedstock position and the region that they're in, but there are going to be some capacities that come out. It takes a couple of years for that to happen, but that's how the cycle works.

So in the short term, I don't expect there to be any significant change in capacity coming on. But in the midterm, I do think you're going to see some projects start to be slowed down.

Peter Vanacker

And then if you look at it, I mean, from a demand side, if you look into the history, than -- with the financial crisis 2008 and 2009, then certainly in 2009 and 2010, you had a big recovery. So growth was higher than it normally is, let's say, over the cycle, let's say, around, I mean, 4% per year. And the same we've seen, I mean also with the pandemic, I mean, then in 2021.

During the second year, you saw a recovery with -- when you compare that to 2020. So I mean, we continue to be just looking, I mean, from a historic point of view. We have consumer behavior -- it could very well be that, also then, we see in the future that there's going to be higher demand compared to, I mean, to the average, over the cycle, demand growth of about 4% per year on polyethylene.

Operator

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

John Roberts

Thank you. Will the delay in closing the refinery push back the time frame to achieve the \$1 billion EBITDA from circular plastics? I assume you're going to be later in converting some of the gasifiers and so forth at the location.

Peter Vanacker

The clear answer on that is, John, no, it's not. I mean, our target remains, I mean, unchanged in the circular and low-carbon solutions business, as we have communicated on the Capital Markets Day.

Operator

Thank you. Our next question comes from the line of Jeff Zekauskas with J.P. Morgan. Please proceed with your question.

Jeff Zekauskas

Thanks very much. I think a couple of years ago, in Advanced Polymer Solutions, you were earning about \$300 million. And today, guess the quarterly run rate is about \$100 million. What happened to that business?

And in your forecast of \$500 million in EBITDA from circular polymers, what EBITDA margin do you expect on that? Or what EBITDA margin does that number still hold?

Torkel Rhenman

Thank you for the question. On the APS, and as I covered when we had the Capital Markets Day, I think we've really lost the focus on the business and our customers when we went through the integration. And we took out a lot of cost and synergy. But this is a business that really requires this customer centricity.

It's a project-based business. You have to have a really good growth pipeline, and a very, very good service level. And that's the recognition that, I think from the whole integration, that we made some mistakes. And we really have not put together this transformation plan to deliver what this business can perform.

And that's the journey that we're on. And I'm confident that we're going to deliver on it. We're making good progress. But it is a transformation that will take a couple years.

Michael McMurray

And then, Jeff, it's Michael. One other thing that I'd add, if you're looking at current year results versus historic results, remember, at the start of this year, we removed two relatively significant businesses from the APS segment and put it back in O&P. So that's not an apples-to-apples comparison, if you're looking at this year versus history -- just as a reminder.

Peter Vanacker

And to your question, I mean, on the circular business, Jeff -- I mean the \$500 million in -- by 2027, and then the \$1 billion by 2030 -- when we talked about that on the Capital Markets Day, you know that we are talking by about 2 million tons of target by 2030. The margins that we talked about, I mean, you can do the back of the envelop calculation, pretty much is incremental EBITDA on top of the EBITDA that we normally make, I mean, in our crackers. So it gives you a bit of guidance, also, here.

I must say, if we look at the margins that we are creating, I mean, today with that business, you know that since we started the business, we have been able, I mean, to grow the business quite substantially. Of course, albeit, I mean, still at a low level, compared to the overall volumes that we are having in the polyolefins. We see that the margins that we can capture or are substantially higher than what we have said, I mean, at the Capital Markets Day.

And again, it's a separate business that is being created -- I keep repeating that -- like I said at the Capital Markets Day, with its own supply and demand that has its own value-based pricing mechanisms that we are positioning in the marketplace. So this is not a market where you have a polyolefin plus a premium type of approach.

Operator

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

Hassan Ahmed

Morning, guys. Just wanted to revisit the earlier question around polyethylene exports out of the U.S. Look, I mean, a lot of this capacity that's been coming online in the U.S. has been with an eye to the export markets. And as you guys and others have talked about,

the European market isn't looking great. Asia hasn't rebounded the way one would have expected it to.

So I mean, are you seeing a scenario where some of that product that was meant for the export market isn't making its way to the export markets and potentially is putting further downward pressure on PE pricing in the U.S.?

Peter Vanacker

Well, one of the things, Hassan, that we have seen, already since the end of last year, and this has maybe also a bit to do, I mean, with some learnings out of running a business like that in a pandemic environment, is that there has been substantially more discipline in the marketplace.

So just like we, as a leader in the industry, have reduced, I mean, the output instead of pushing products into the market, others have done, I mean, the same thing. So you see a change, in my view, in terms of behavior compared, I mean, to the history. Ken, anything you want to add?

Ken Lane

I completely agree with that. And like I had mentioned before, there will be headwinds with this capacity coming on. There always is. But the capacity comes on one time. And then you feel it and the market will adjust to that. I also said earlier, we're seeing some strength in some of the export markets, especially going south. So we're starting to see some growth in some markets, like Brazil, that's going to help absorb some of that capacity.

So I'm not any more concerned about it now than I was six months ago. Southeast Asia is even looking a little bit better. We've seen that trend over the last couple of months. So the markets are going to absorb it, over time. And like Peter said and Michael had said, we'll adjust our operating rates to optimize cash.

Operator

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

Peter Vanacker

Okay. Thank you very much. As usual, very thoughtful questions. We're looking forward to sharing the updates on our progress towards unlocking additional value, of course, over the coming months. And we wish you all a great weekend. And as usual, stay safe. Thank you very much.

Operator

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