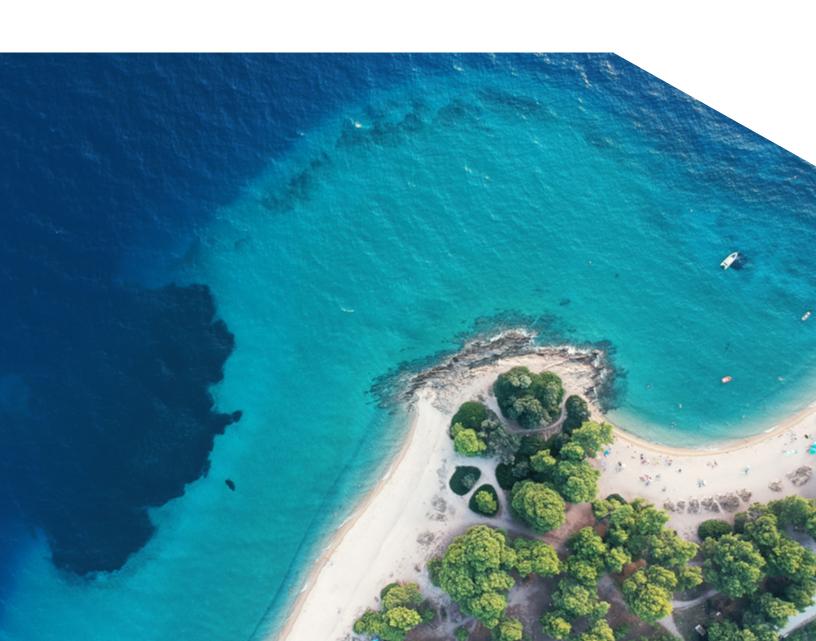


Green Bond Report

2023



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About us



A letter from our Chief Financial Officer and Chief Sustainability Officer

At LYB, we embrace sustainability as an opportunity to create value for our stakeholders, the environment and society. This past year, we took significant strides toward realizing our sustainability goals and establishing LYB as an industry leader in sustainability. Foundational to our success is our continuing focus on three global sustainability challenges: ending plastic waste, taking climate action and supporting a thriving society.

We are addressing plastic waste by investing in innovative solutions to recycle post-use plastics and grow our *Circulen* family of polymers. In 2023, we made investments to secure feedstock supply, expand our recycling footprint and develop scalable technologies to recycle post-use plastics. We also invested in recycling infrastructure in North America, Europe and Asia and announced our decision to build a first-of-its-kind commercial-scale advanced recycling plant using our proprietary *MoReTec* technology.

We are taking climate action with an industry-leading carbon reduction strategy to reach net zero scope 1 and 2 greenhouse gas ("GHG") emissions from global operations by 2050. By 2030, we aim to reduce scope 1 and 2 GHG emissions by 42%, and scope 3 GHG emissions by 30% — all relative to a 2020 baseline. We are focusing on four levers to achieve our climate ambitions: energy efficiency; renewable energy and electrification; hydrogen; and carbon capture, use and storage. Our commitment to reducing GHG emissions is aligned with our customers' needs, and we believe our efforts will generate value for LYB, our shareholders and society.

We are supporting a thriving society through our relentless pursuit of safety, operational excellence, and a diverse, inclusive and equitable workforce. We partner with the communities where we operate to make positive impacts and are committed to giving back by working with local organizations on initiatives to address critical needs.

In May 2023, we published our Green Financing Framework (the "Framework") and issued our inaugural \$500 million green bond (the "Green Bond") to allocate capital toward initiatives aligned with our ambitions to end plastic waste and take climate action. We are using the net proceeds to finance new or existing green projects that meet the eligibility criteria set forth in the Framework (the "Eligible Green Projects").

As of Dec. 31, 2023, we have allocated approximately \$195 million out of \$495 million of net proceeds from the Green Bond to Eligible Green Projects. This report describes the allocation of net proceeds to Eligible Green Projects and their expected environmental impact. We will publish this report annually until full allocation of the net proceeds.

In closing, at LYB, sustainability lives within the core of who we are. We invite our stakeholders to delve deeper into our projects and learn more about the environmental impacts they are expected to generate in this report and our 2023 Sustainability Report.

Michael McMurray

Executive Vice President and Chief Financial Officer

Andrea Brown

Vice President and Chief Sustainability Officer



Approach to sustainability

We are LYB – a leader in the global chemical industry creating solutions for everyday sustainable living. Through advanced technology and focused investments, we are enabling a circular and low carbon economy.

Across all we do, we aim to unlock value for our business, our stakeholders and society. As one of the world's largest producers of polymers and a leader in polyolefin technologies, we develop, manufacture and market high-quality and innovative products for applications ranging from sustainable transportation and food safety to clean water and quality healthcare.

At LYB, we are committed to leading the transformation of our industry by developing circular and low carbon solutions at scale and championing chemistry as an enabler of sustainable solutions for our planet. Our approach to sustainability shapes how we manage our business and drives our strategic objectives.

We have set industry-leading sustainability goals to tackle three global challenges: ending plastic waste, taking climate action and supporting a thriving society. We believe each of these challenges is an opportunity for LYB to create value for our business, our stakeholders, and society.

Ending plastic waste

2MMt+

of recycled and renewable-based polymers will be produced and marketed annually by 2030¹

for every \$

we invest in venture funds that address the plastic waste challenge, we help catalyze another 5 dollars from co-investors

zero

plastic pellet loss to the environment from our facilities

Taking climate action

net zero

greenhouse gas emissions from operations by 2050²

42%

absolute scope 1 and 2 greenhouse gas emissions reductions from operations by 2030³

30%

absolute scope 3 greenhouse gas emissions reduction by 2030³

50%

minimum of electricity procured from renewable sources by 2030⁴

Supporting a thriving society

zero

incidents, injuries and accidents

achieve

gender parity in senior leadership globally by 2032

increase

the number of people from underrepresented groups in U.S. senior leadership roles to reflect the general population ratio by 2032

assess

a minimum of 70% of our key suppliers globally using sustainability criteria by 2025

We invite you to explore our 2023 Sustainability Report for insights into our wider sustainability initiatives beyond the projects funded from the Green Bond proceeds.

- 1. Million metric tons. Production and marketing includes: (i) joint venture production marketed by LYB plus our pro rata share of the remaining production produced and marketed by the joint venture, and (ii) production via third-party tolling arrangements.
- 2. Our 2050 net zero goal includes scope 1 and 2 emissions.
- 3. Relative to 2020 baseline.
- 4. Based on 2020 procured levels.

Green Financing Framework and Green Bond

In May 2023, LYB established our Framework to help finance the development and integration of our long-term sustainability strategy and goals. Standard & Poor's provided a second party opinion on our alignment with third-party sustainable finance principles, guidelines and standards. The Framework is available on our website at www.lyb.com, together with the second party opinion.

On May 19, 2023, we issued our inaugural Green Bond under the Framework. The \$500 million of guaranteed notes have a fixed rate coupon of 5.625% per annum and are due on May 15, 2033. This report describes our allocation of the net proceeds of the Green Bond to Eligible Green Projects and their expected environmental impact.

Use of proceeds

The Green Bond net proceeds of approximately \$495 million, after deducting underwriting discounts and offering expenses, are being used to finance or refinance, in whole or in part, new or existing Eligible Green Projects that fall in one or more of the following categories and meet the eligibility criteria outlined in the Framework:

- Circular economy adapted products, production technologies and processes
- Renewable energy
- · Pollution prevention and control
- · Energy efficiency

Existing projects qualify with a two-year lookback period from the time of issuance of the Green Bond. Any portion of the net proceeds that are not yet allocated to Eligible Green Projects will be managed in accordance with our normal liquidity management practices. If a project is not completed or no longer meets the eligibility criteria at any time, we intend to reallocate the funds to other Eligible Green Projects.



Green Bond governance

LYB has established a Green Financing Committee responsible for governing the evaluation and selection of the Eligible Green Projects, managing the allocation of net proceeds from the Green Bond, and tracking expenditures for Eligible Green Projects. The Green Financing Committee is composed of representatives from our Sustainability, Net Zero, Circular and Low Carbon Solutions ("CLCS"), Treasury, Legal, Accounting and Capital Planning groups.

The Green Financing Committee maintains a Green Financing Register to record, on an ongoing basis, the allocation of net proceeds from the Green Bond to Eligible Green Projects.

Bond to Eligible Green Projects. Our corporate policies, guidelines and commitments set the minimum standards for environmental and social compliance in the conduct of our businesses. Our policies will be used by the Green Financing Committee to ensure that environmental and social risks that could be potentially associated with any Eligible Green Projects are properly assessed, mitigated and monitored through our due diligence processes. Our policies, 2023 Sustainability Report, and corporate governance information can be found on our website.

Allocation of net proceeds and impact

LYB will report annually on the allocation of net proceeds of the Green Bond and the impact of our portfolio of Eligible Green Projects. This is our first report (one year after the issuance of the Green Bond) and future reports will continue until full allocation or in case of any material change. As established by the Framework, this report is accompanied by management's assertion regarding our use of proceeds (Appendix A to this report) and an assurance report from independent accountants issued by PricewaterhouseCoopers LLP ("PwC") (Appendix B to this report).

As of Dec. 31, 2023, LYB has allocated \$195 million out of \$495 million of net proceeds of the Green Bond to Eligible Green Projects that meet the eligibility criteria stated in the table on page 8. Additional information about Eligible Green Projects and the related eligibility criteria may be found in the "Use of Proceeds" section of the Framework.

As permitted in the Framework, LYB allocated net proceeds of \$59 million, with the expectation that less than 25% of total net proceeds would be allocated to existing projects pursuant to the two-year lookback period preceding the date of Green Bond issuance.

Our sustainability goals and activities extend beyond the scope of the Framework and the Eligible Green Projects. These initiatives are funded through channels other than the Green Bond and are not reflected in the allocation of net proceeds.



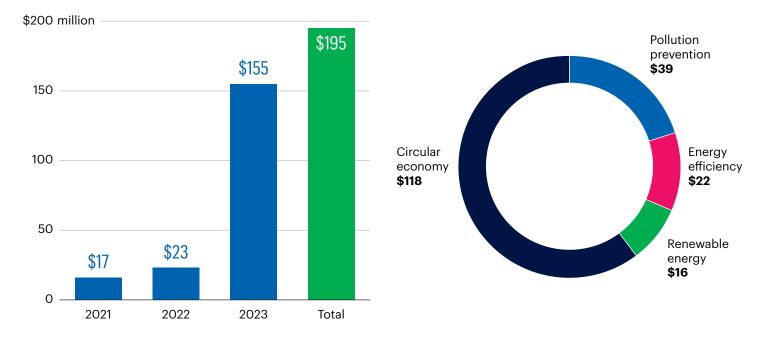
Allocation of net proceeds and impact

	Eligible Green Project Category and Eligibility Criteria	Allocated Amount as of Dec. 31, 2023 (in millions) ¹	Impact
	Circular economy adapted products, production technologies and processes Expenditures related to research, development, manufacturing, and distribution of products made with mechanically and advanced recycled feedstocks that are designed to enable more circular solutions resulting in net reductions in product lifecycle GHG emissions. Expenditures included investments in MoReTec-1, an advanced recycling plant that uses our MoReTec technology designed to convert post-consumer plastic waste into feedstock for the production of new polymers, as well as investments in joint ventures and venture capital funds, which as outlined in the operating agreements, are focused on advancing innovation and the development of plastic waste sorting, recycling technologies and infrastructure	\$118	 MoReTec-1 is expected to produce ~50,000 metric tons ("mt") of advanced recycled feedstock from plastic waste annually. This feedstock will be used to produce new polymers which will be sold by LYB under the CirculenRevive brand and used in a wide range of applications, including medical and food packaging. Source One Plastics ² is expected to process ~70,000 mt of difficult-to-recycle post-consumer plastic waste, such as mixed plastic packaging and flexible polyolefins materials plastic waste, annually. The majority of this waste will supply MoReTec-1 rather than be sent to incineration. Other joint venture recycling projects are expected to process ~200,000 mt of plastic waste in the aggregate annually.³
*	Renewable energy Expenditures related to the purchase of renewable energy and energy attribute certificates under long-term solar and wind power purchase agreements ("PPAs").4 Expenditures included the actual dollar value of renewable energy generated at four renewable energy projects associated with our North American portfolio of PPAs which became operational in 2023.	\$16	• The PPAs support solar and wind projects in the U.S. that will generate more than 1 million megawatt hours ⁵ of clean electricity annually, and enable the reduction of our GHG emissions by 350,000 mt each year.
	Expenditures related to waste recovery, heat integration and process optimization initiatives which are designed to lower the energy demand of our operations. Expenditures included investment in new equipment and technology used at our Rotterdam-Botlek site which are designed to enable steam released from industrial processes to be reused in our operations as well as investments in similar equipment and technology at our Wesseling, Germany site.	\$22	 The Rotterdam-Botlek project will result in a minimum annual decrease of natural gas consumption of 50 million cubic meters ("m³"), GHG emissions reductions of 100,000 mt per year, and nitrogen emissions reductions of 40,000 kilograms ("kg") per year. LYB will be the largest consumer of this steam. ~250,000 mt of GHG emissions reductions in the aggregate expected annually.⁶
	Pollution prevention and control Expenditures related to waste utilization and new technologies and infrastructure that are designed to reduce environmental pollutants, minimize environmental impact and carbon footprint, and electrify processes to replace fossil fuels with low carbon or renewable electricity. Expenditures included investment in a circular steam project which involved the development of new infrastructure that is designed to convert water-based waste into energy as well as investment in a project which involved the upgrading of equipment that is designed to reduce steam energy consumption by replacing it with electricity at our Wesseling, Germany site.	\$39	 The Circular Steam Project, which converts water-based waste into energy, reduced caustic waste generated by our Maasvlakte site by 120,000 mt, other waste fuels by 48,000 mt, and overall hazardous waste generation by 10% in 2023.⁷ Expected annual GHG emissions reductions of 96,000 mt at our Wesseling, Germany site.
Total Allocation		\$195	
Total Net Proceeds		\$495	
% of Net Proceeds Allocated		39%	

- 1. Joint venture related expenditures included in the allocated amount represent LYB portion.
- 2. LYB has a 49% equity interest in Source One Plastics.
- 3. Joint venture projects and LYB equity interest: Stiphout Industries B.V. (50%), LMF Nord, GmbH (50%) and Cyclyx International (25%). Impact of projects developed through investments in venture capital funds are excluded.
- 4. References to PPAs include virtual power purchase agreements (VPPAs).
- 5. Represents the LYB portion of the projects as determined by the project developer.
- 6. Includes the Rotterdam-Botlek steam network GHG emissions reductions.
- The Maasvlakte plant is a 50/50 joint venture operated by LYB. As the operator, LYB
 reports 100% of the environmental impacts. For purposes of this report, the impact
 metric relates to waste reduction only.

Green Bond spend by year

Green Bond allocation as of Dec. 31, 2023



Allocation of net proceeds to Eligible Green Projects is based on actual cash outlays (except for PPAs) and includes:

- · Capital expenditures
- Operating costs and expenses in the form of maintenance, procurement, purchasing and other direct manufacturing costs
- Late-stage research and development expenditures, which demonstrate expected climate benefits or are designed for low-carbon applications
- Acquisitions of assets and/or entities substantially active in any of the Eligible Green Project Categories with at least 90% of the revenue of the acquired asset or entity derived from activities within these categories
- Equity investments and loans (after giving pro-rata effect to eligibility under the Framework and the share of our stake for investments)

In the case of PPAs, the allocated amount represents the dollar value of the renewable energy generated at the contracted fixed price.

The dollar value of any subsidies, tax credits and grants that may apply to the Eligible Green Projects are excluded from the allocation of net proceeds.



Featured projects

In this section, we showcase key highlights of notable Eligible Green Projects by category.

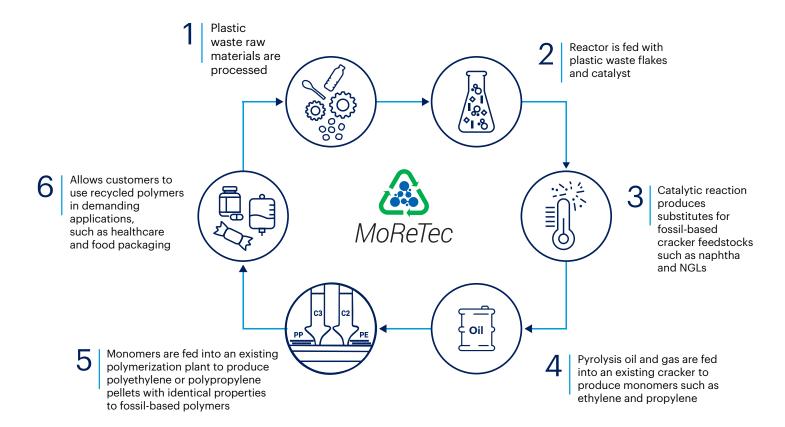
Circular economy adapted products, production technologies and processes

We recognize the pressing need to eliminate plastic waste in the environment and transition toward a circular economy. Proceeds from the Green Bond were allocated to projects that build our capacity to recycle plastic waste and produce recycled and renewable-based products, and promote innovative solutions to the plastic waste challenge.

MoReTec-1

In November 2023, we made the final investment decision to build a first-of-its-kind commercial-scale advanced recycling plant at our Wesseling, Germany site ("MoReTec-1"). MoReTec-1 will use our proprietary MoReTec technology to convert post-consumer plastic waste into feedstock for the production of new plastic materials. MoReTec-1 is expected to have an annual production capacity of 50,000 mt of feedstock per year and is designed to recycle the amount of plastic packaging waste generated by more than 1.2 million German citizens annually. Construction is expected to be completed by the end of 2025.

How MoReTec works



Cyclyx

In 2023, we invested in Cyclyx International (25% equity interest), a joint venture further upstream in the value chain involved in plastic waste sorting and processing, to accelerate innovation and development of the necessary advanced sorting infrastructure in the U.S. to enable a circular economy for plastics. We also signed a final investment agreement with Cyclyx International to build the first Cyclyx Circularity Center ("CCC") in Houston with the aim of diverting millions of pounds of plastic waste from landfills. With a designed annual capacity to process 150,000 mt of mixed plastic material, the CCC will produce feedstock for mechanical and advanced recycling. This new facility will sort and process mixed plastic waste, including waste collected through the Houston Recycling Collaboration plastic collection program, of which LYB is a founding member.

Source One

In 2022, we invested in Source One Plastics (49% equity interest). This joint venture processes difficult-to-recycle plastic waste at its new advanced sorting facility in Eicklingen, Germany. The facility uses an innovative dry processing method to reduce energy consumption by up to 30% compared to conventional methods and minimizes plastic dust release. The facility will be powered by locally generated renewable electricity as well. It will supply processed plastic waste feedstock for the *MoReTec-*1 plant.

Renewable energy

Renewable energy is a key component of our efforts to reduce our carbon footprint. Our procured electricity represents approximately 15% of our total scope 1 and 2 footprint. Long-term PPAs are an important tool to help us achieve our goal of securing at least 50% of our procured electricity volumes from renewable sources by 2030. As of Dec. 31, 2023, Green Bond proceeds have been allocated to PPAs for solar and wind development projects in the U.S. that are operational.

As of December 2023, we have executed PPAs representing almost 90% of our 2030 target, bringing our total procured renewable electricity to 1,385 megawatts ("MW"). These agreements will generate an estimated 3.7 million megawatt hours ("MWh") of renewable electricity annually and reduce our scope 2 GHG emissions by more than 1.3 MMt once projects are operational. Four projects from our North America portfolio of PPAs became operational in 2023 resulting in 422 gigawatt hours of renewable electricity delivered to LYB. These projects allowed us to reduce GHG emissions from our operations by approximately 150,000 mt in 2023.

Region	Technology	Estimated start up	Power generation capacity (MW)
USA	Wind	Active	100
USA	Solar	Active	280
USA	Wind	2025-2026	173
USA	Solar	2025-2026	325
Europe	Solar	Active	5
Europe	Wind	2025-2026	252
Europe	Solar	2025-2026	250
		Total	1,385



Projects listed are as of Dec. 31, 2023 and represent the LYB percentage participation in the project.

Energy efficiency

Energy efficiency is one of our GHG emissions reductions levers, including optimizing our use of energy from steam. In Rotterdam-Botlek, we are a part of a collaborative effort to expand the steam network to enable the use of residual industrial steam. By expanding the Botlek steam network, this initiative will replace steam that is currently produced using natural gas with residual steam produced as a byproduct of industrial processes by AVR, a residual waste processor, and Cabot Corporation, a chemical company. This will result in a minimum decrease of natural gas consumption of 50 million m³, GHG emissions reductions of 100,000 mt per year, and a reduction of 40,000 kg of nitrogen emissions per year. The Botlek Steam Network will have the potential capacity to further reduce gas consumption up to 200 million m³, a potential reduction of 400kt of GHG emissions and 160,000 kg of nitrogen emissions per year. LYB will be the largest consumer of this steam, which will contribute to reducing scope 2 emissions at our Botlek site, and reduce the footprint of our propylene oxide co-products and derivatives produced onsite.

Pollution prevention and control

We continue to find innovative ways to reduce our waste generation. Our overall waste generation continues to decrease, with a 12% reduction since 2022, primarily due to the Circular Steam Project at our Maasvlakte site in the Netherlands and the shutdown of operations in Tuscola, Illinois. The Maasvlakte facility is a joint venture in which LYB owns a 50% equity interest, with LYB serving as the operator for the facility. The Circular Steam Project incorporated innovative technology into the existing production plant to convert its water-based waste into energy and was completed in October 2021. The installation took the site's existing production process to a higher level of efficiency and sustainability. In 2023, the site was able to reduce caustic waste by 120,000 mt, and other waste fuels by 48,000 mt. The successful operation of this technology has reduced our overall hazardous waste generation by approximately 10%.



Appendix A: Management assertion

May 13, 2024

Management of LyondellBasell Industries N.V. ("LYB") asserts that \$195 million of the \$495 million of net proceeds from the May 19, 2023 issuance of \$500 million aggregate principal amount of 5.625% guaranteed notes due 2033 were allocated to finance or refinance expenditures incurred from May 19, 2021 (two-year lookback period from the time of issuance) to Dec. 31, 2023 for Eligible Green Projects that meet the eligibility criteria as described in the "Eligible Green Project Category and Eligibility Criteria" column and the dollar amounts presented in the "Allocated Amount as of Dec. 31, 2023" column in the table on page 8 of this report. LYB's management is responsible for the accuracy and validity of this management assertion.

Appendix B: Independent accountant's report



Report of Independent Accountants

To the Management of LyondellBasell Industries N.V.

We have examined the accompanying management assertion of LyondellBasell Industries N.V. (LYB) that \$195 million of the \$495 million of net proceeds from the May 19, 2023 issuance of \$500 million aggregate principal amount of 5.625% guaranteed notes due 2033 were allocated to finance or refinance expenditures incurred from May 19, 2021 (two-year lookback period from the time of issuance) to Dec. 31, 2023 for Eligible Green Projects that meet the eligibility criteria set forth in management's assertion. LYB's management is responsible for its assertion. Our responsibility is to express an opinion on management's assertion based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants (AICPA). Those standards require that we plan and perform the examination to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects. An examination involves performing procedures to obtain evidence about management's assertion. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of management's assertion, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

We are required to be independent and to meet our other ethical responsibilities in accordance with relevant ethical requirements related to the engagement.

Only the information in the management assertion on page 13 and the "Eligible Green Project Category and Eligibility Criteria" and "Allocated Amount as of Dec. 31, 2023" columns within the table on page 8 of this *LyondellBasell Green Bond Report 2023* is part of LYB's management assertion and our examination engagement. The other information in this *LyondellBasell Green Bond Report 2023* has not been subjected to the procedures applied in our examination engagement, and accordingly, we make no comment as to its completeness and accuracy and do not express an opinion or provide any assurance on such information.

In our opinion, management's assertion is fairly stated, in all material respects.

Houston, Texas May 13, 2024

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Disclaimer

The information, statements, and opinions set out in this report are for informational purposes only and speak only as of the date of this report. This report shall not be deemed an offer to sell or a solicitation of an offer to buy our securities. Our registration statement, including a base prospectus and accompanying prospectus supplement, were filed with the U.S. Securities and Exchange Commission for any offering to which this communication relates, and can be found for free by visiting EDGAR on the SEC website at www.sec.gov.

The statements in this report relating to matters that are not historical facts are forward-looking statements. These forwardlooking statements are based upon assumptions of management of LYB, which are believed to be reasonable at the time made and are subject to significant risks and uncertainties. When used in this report, the words "estimate," "believe," "continue," "could," "intend," "may," "plan," "potential," "predict," "should," "will," "expect," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. Actual results could differ materially based on factors including, but not limited to, market conditions, the business cyclicality of the chemical, polymers and refining industries; the availability, cost and price volatility of raw materials and utilities, particularly the cost of oil, natural gas, and associated natural gas liquids; the successful construction and operation of any proposed facilities described; technological developments, and our ability to develop new products and process technologies; our ability to meet our sustainability goals, including the ability to operate safely, increase production of recycled and renewable-based polymers to meet our targets and forecasts, and reduce our emissions and achieve net zero emissions by the time set in our goals; our ability to procure energy from renewable sources; and our ability to build a profitable Circular and Low Carbon Solutions business. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the Risk Factors section of our Form 10-K for the year ended Dec. 31, 2023, which can be found at www.lyb.com on the Investor Relations page and on the Securities and Exchange Commission's website at www.sec.gov. There is no assurance that any of the actions, events, or results of the forward-looking statements will occur, or if any of them do, what impact they will have on our results of operations or financial condition. Forward-looking statements speak only as of the date they were made and are based on the estimates and opinions of management of LYB at the time the statements are made.

LYB does not assume any obligation to update forward-looking statements should circumstances or management's estimates or opinions change, except as required by law. This report contains time-sensitive information that is accurate only as of the date hereof. Information contained in this release is unaudited and is subject to change. We undertake no obligation to update the information presented herein, except as required by law.

Our reported emissions and expected reductions are based on a combination of measured and estimated data and are based on industry standards and best practices, including the Greenhouse Gas Protocol and guidance from the American Petroleum Institute. Emissions reported are estimates only, and data is subject to change as methods, data quality, and technology improvements occur. Our goals to reduce emissions are good-faith efforts based on current relevant data and methodology, which could be changed or refined as we evolve our approach to identifying, measuring, and addressing emissions.

About us

We are LyondellBasell ("LYB") – a leader in the global chemical industry creating solutions for everyday sustainable living. Through advanced technology and focused investments, we are enabling a circular and low carbon economy. Across all we do, we aim to unlock value for our customers, investors and society. As one of the world's largest producers of polymers and a leader in polyolefin technologies, we develop, manufacture and market high-quality and innovative products for applications ranging from sustainable transportation and food safety to clean water and quality healthcare. For more information, please visit www.lyb.com or follow @LyondellBasell on LinkedIn.

