



Overall Assessment

LyondellBasell (LYB) could be aligned with a below -2°C pathway by 2030.

LYB aims to achieve carbon neutrality by 2050, with interim targets to cut Scope 1 and 2 emissions by 42% and Scope 3 emissions by 30% by 2030, from a 2020 baseline. While these are among the most ambitious targets in the chemical sector, total GHG emissions rose 7.6% between 2020 and 2024, driven by Scope 3 growth linked to higher production volumes. Achieving the planned reductions will therefore require accelerated mitigation measures and full delivery of planned operational initiatives.

LYB's transition actions include adding 1,820 MW of renewable capacity under long-term PPAs, efficiency and electrification projects, and the Wesseling coal-phaseout. Circularity investments, such as the MoReTec-1 chemical recycling plant, APK acquisition, and Cyclyx feedstock ventures, mark progress toward lower-carbon materials but remain weakly linked to quantifiable GHG reductions.

Governance and financial integration are strengthening through internal carbon pricing and improved Emissions Trading System (ETS) disclosure, yet physical risk quantification and long-term remuneration incentive alignment remain limited. If LYB delivers its 2030 targets and demonstrates measurable delivery on circularity initiatives, it could align with a below-2°C pathway (Planet Tracker green category). However, rising emissions and limited Scope 3 impact could derail the company's alignment.

This report is one of a series examining the climate transition plans of companies in the Climate Action 100+ list. This project is separate to and not affiliated with Climate Action 100+.



Aligned with
1.5°C



Aligned with
+2°C



Aligned with
BAU+3°C

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Climate Alignment

- Between 2020 and 2024, LYB's total GHG emissions increased by 7.6%, mainly driven by growth in upstream and downstream Scope 3 emissions, despite moderate reductions in Scope 1 and 2.
- However, the company's targets - 42% absolute reduction in Scope 1 and 2 and 30% in Scope 3 by 2030 - are among the most ambitious in the chemical sector.



Policy and Governance

- LYB's governance structure provides clear sustainability oversight through its Board-level HSE&S Committee and management teams, overseeing its transition and incentivised by short-term remuneration incentives linked to sustainability outcomes.
- However, climate policy engagement remains cautious and long-term remuneration incentives linked to climate metrics are missing.



Risk Analysis

- The company quantifies its EU ETS exposure (up to USD 162 million by 2030) and applies internal carbon prices in Europe and the Americas to guide capital decisions.
- However, while not impacting its transition plans, broader physical-risk exposures remain unquantified, leaving an incomplete view of LYB's total financial vulnerability.



Strategy Assessment

- Around USD 1 billion has been invested since 2023 in transition-related projects, including MoReTec-1 chemical recycling, Cyclyx feedstock ventures, and 1.8 GW of renewable capacity under PPAs. Meanwhile, USD 200 million in 2024 (10.9% of total capex), and USD 268 million in 2025 (15.3% of total capex) was classified as sustainability linked capex by LYB.
- If LYB delivers on its 2030 targets and strengthens the link between circularity investments and measurable GHG abatement, Planet Tracker expects the company to align with a below-2°C pathway by 2030.

Company Overview

LyondellBasell (LYB), is a global petrochemical producer, ranking in the top eight chemical companies by revenue¹. In 2024, the company reported annual sales of USD 40.3 billion and net income of USD 1.37 billion, with EBITDA (excluding identified items) reaching USD 4.34 billion and operating cash flow of USD 3.8 billion. Historically, the company derived its revenue from six operating segments, namely, Olefin and Polyolefins (O&P) Americas², O&P Europe, Asia, and International (EAI)³, Intermediate and Derivatives (I&D)⁴, Advanced Polymer Solutions (APS)⁵, Refining⁶, and Technology⁷. As shown in Figure 1, over the last five years (2020-2024) the O&P EAI segment brought in the highest share of revenue with 26% of the total, followed closely by I&D with 24% and O&P Americas with 19%. While the Refining segment also stood at 19% of revenue over the last 5 years LYB completed the full shutdown of its refinery segment in February 2025, with process units fully decommissioned by March 2025.

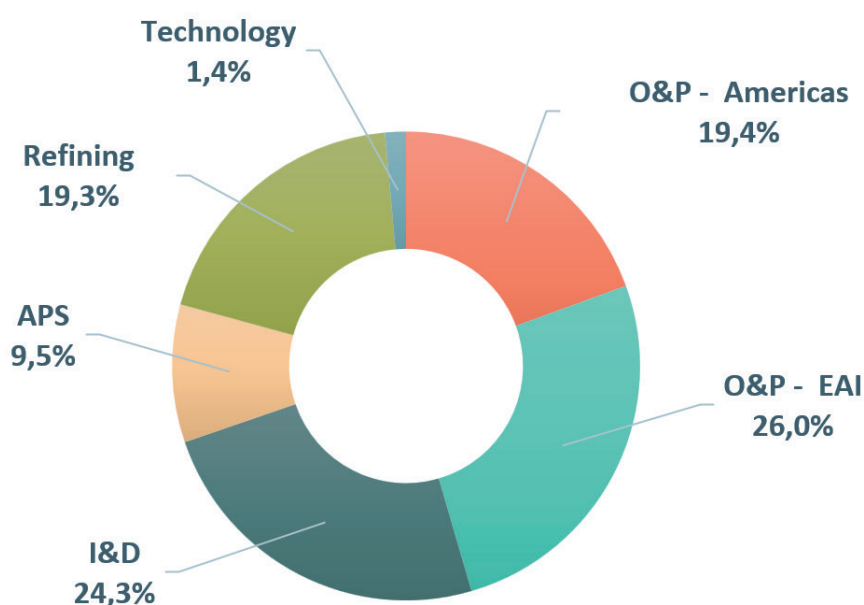


Figure 1: Revenue (%) - Breakdown by Business Segments (5Y Avg.).
Source: LYB Annual Reports 2020-2024 & Planet Tracker's calculations.

LYB is the world's second-largest producer of polypropylene and one of the leading producers of polyethylene⁸. Accordingly, these products represent 16.2% and 19.9% of LYB's total revenue, respectively, as shown in Figure 2.

¹ As shown in "Global Top 50" by Chemical & Engineering News – July 22, 2025.

² Manufactures and markets olefins and co-products, polyethylene and polypropylene in North America and South America.

³ Produces and markets olefins and co-products, polyethylene and polypropylene in Europe, Asia, and other international markets.

⁴ Manufactures and markets propylene oxide and its derivatives; oxyfuels and related products; and intermediate chemicals, such as styrene monomer, acetyls, ethylene oxide and ethylene glycol.

⁵ Produces and markets compounding and solutions, such as polypropylene compounds, engineered plastics, masterbatches, engineered composites, colours and powders.

⁶ Refines heavy, high-sulphur crude oil and other crude oils of varied types and sources available on the U.S. Gulf Coast into refined products, including gasoline and distillates.

⁷ Develops and licenses chemical and polyolefin process technologies and manufactures and sells polyolefin catalysts.

⁸ As stated in the company's 2023 Annual report page 12.

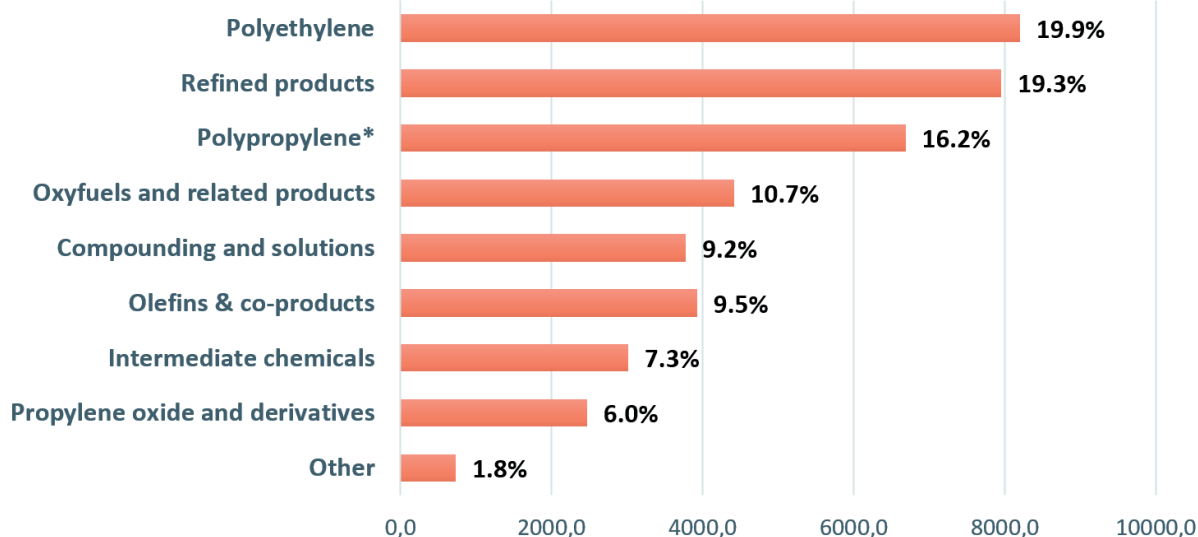


Figure 2: Revenue (%) - Breakdown by Chemicals Sold (5Y Avg.). Source: LYB Annual Reports 2020-2024 & Planet Tracker's calculations. * The "Polypropylene" segment includes the sales from the "Advanced Polymers" segment, which was not reported separately from 2022 to 2024.

Geographically, LYB operates mainly in the Americas, Europe, and Asia. In the last five years, on average, almost half (48%) of LYB's total revenue came from the United States (U.S.), followed by Germany with 7% and China with 5%.

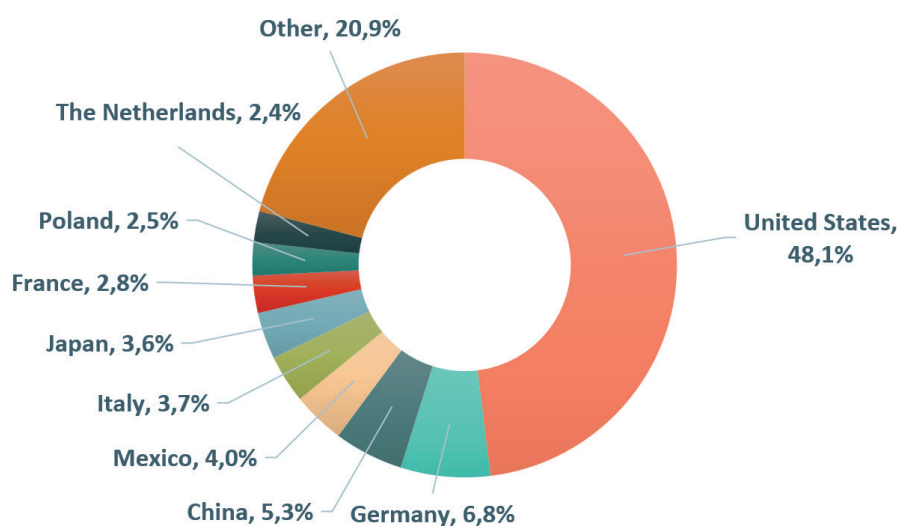


Figure 3: Revenue (%) - Breakdown by Geography (5Y Avg.). Source: LYB Annual Reports 2020-2024.

LYB's main exposure to climate transition risks and opportunities arises from developments in the polyethylene and polypropylene markets with a focus on related policies in the U.S. and Europe. This assumption is further supported by the company's disclosures, as roughly 75% of operating emissions came from North America and 25% from Europe⁹.

⁹ Scope 1 and 2 emissions from other regions represent less than 1% of LyondellBasell footprint.

Climate Alignment

EMISSIONS INVENTORY

LYB's 2024 greenhouse gas (GHG) footprint¹⁰ stood at 133,900 KTCO₂e¹¹. Operating emissions represented 16.5% of its total emissions, with Scope 1 GHG emissions accounting for 11.2%, and Scope 2 emissions (location-based) making up the remaining 5.3%. Most emissions, 83.5%, came from Scope 3 activities. Within this scope, 28.1% of the total came from upstream activities¹², while downstream activities¹³ were responsible for the remaining 55.4%¹⁴. Notably, the main contributors are "Downstream Consumption," accounting for 39.8% of total emissions, and upstream "Purchased Goods," contributing 24.7% of the total footprint, as shown in Figure 4.

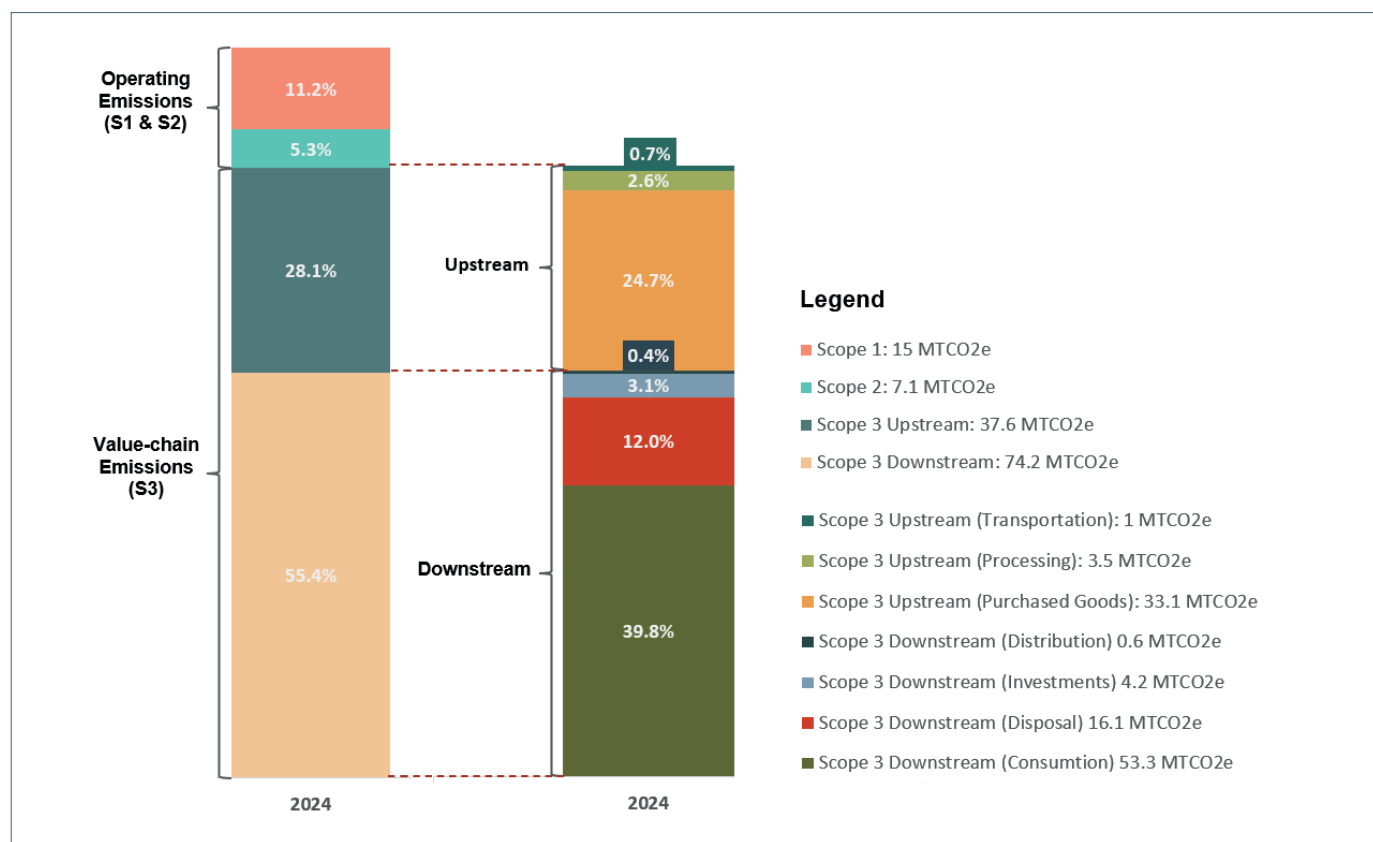


Figure 4: Total GHG Emissions (2024) - Percentage Breakdown by Scope.

Source: LYB's 2024 Sustainability Report.

In the next section, to assess the company's potential emissions evolution, we examine its past performance, targets, and initiatives disclosed to mitigate its GHGs footprint.

¹⁰ Presented in its 2024 Sustainability Report in MTCO₂e, with restated GHG figures for 2020, 2022, 2023 and 2024, for Scope 3 Categories.

¹¹ This is an approximation, as 12.24 MTCO₂e were converted to KTCO₂e, for easier company comparison between peers.

¹² **Scope 3 upstream** emissions include: (a) Purchased Goods - accounting for the emissions associated with chemicals considered as feedstock; (b) Processing - including the "Capital Goods" emissions - i.e., emissions relating to capital expenditures for property, plant and equipment, the emissions from "Fuel and Energy Activities" not covered in Scope 1 and 2, and emissions from hazardous and non-hazardous "Waste generated in Operations"; (c) Transportation - covering emissions from "Upstream Transport & Distribution" associated with inbound (suppliers) transport operations.

¹³ **Scope 3 downstream** emissions include: (a) Consumption - covering emissions associated with the "Use of sold products" primarily comprised of sold fuel products from refinery operations, olefin operations and the oxyfuels business; (b) Disposal - or emissions from "End of life treatment of sold products" - i.e., emissions related to the typical end-of-life treatments arising during recycling, incineration, and landfilling of articles at the end of their service life; (c) Investments - referring to the emissions from equity investments; (d) Distribution - emissions from the transportation of finished goods.

¹⁴ This distribution is relatively similar to another leading chemical company, SABIC [add CTA link], which ranked in the top seven chemical companies by revenue in 2023.

EMISSIONS TRENDS AND TARGETS

Company Trends

Between 2020 and 2024, LYB increased total GHG emissions by 7.6%, rising from 124,400 KTCO₂e to 133,900 KTCO₂e. This increase was primarily due to rises in Scope 3 Upstream and Downstream emissions of 13.3% and 9.1%, respectively, over the period. Meanwhile, Scope 1 and 2 decreased by 3.8% and 6.6%, respectively, as shown in Table 1.

Table 1: GHG Emissions Evolution 2020-2024 – Percentage Change Breakdown by Scope.
Source: LYB's 2024 Sustainability Report and Planet Tracker Calculations.

Scope	2020	2022	2023	2024	Absolute Change (2020-2024)
Scope 1 emissions	15,600	14,700	15,400	15,000	-3.8%
Scope 2 (market-based) emissions	7,600	7,400	7,000	7,100	-6.6%
Scope 3 - Upstream emissions	33,200	33,700	34,700	37,600	13.3%
Scope 3 - Downstream emissions	68,000	72,700	72,000	74,200	9.1%
Scope 1+2+3	124,400	128,500	129,100	133,900	7.6%

This overall increase in GHG emissions is linked to the growth in LYB's global production volumes which increased by 8.5% from 38.8 MMT in 2020 to 42.1 MMT in 2024.

Company Targets

In its 2024 sustainability report, LYB commits to reduce absolute Scope 1 and 2 GHG emissions by 42% by 2030 and achieve carbon neutrality by 2050¹⁵, both from a 2020 baseline. In addition, the company aims to procure a minimum of 50% of its electricity from renewable sources by 2030. At the same time, LYB commits to reduce Scope 3 emissions¹⁶ by 30% by 2030, on an absolute basis. This is the most ambitious Scope 3 target of companies in the CA100+ chemical sector¹⁷.

To deliver on its operating targets the company presents future initiatives such as (a) energy efficiency, (b) renewable electricity and electrification, (c) hydrogen use, and (d) carbon capture and storage/utilisation (CCS/CCU). These initiatives are broadly quantified in Figure 5.

¹⁵ LYB refers to this target as achieving net zero GHG emissions from its global operations by 2050 – i.e., from its Scope 1 and 2 activities. This is defined as Carbon Neutrality. For a Net Zero ambition, LYB's 2050 goal should include a Scope 3 absolute reduction target too.

¹⁶ The mitigation target only includes Scope 3 categories 1, 3, 4, 11, 12, and 15, in line with SBTi's target setting requirements.

¹⁷ For more details see [Lessons in Chemistry: Climate Action Giants](#).

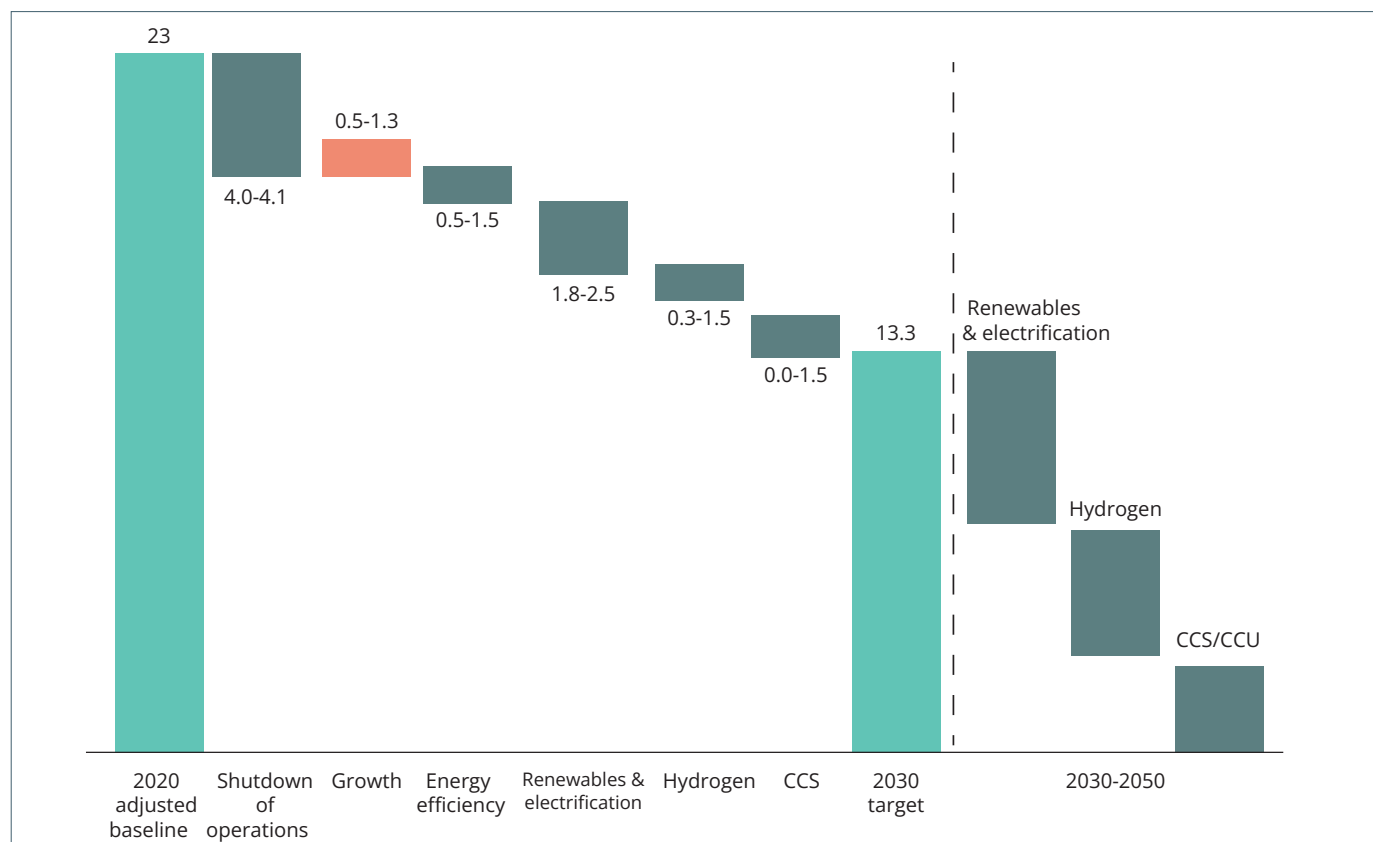


Figure 5: LYB Carbon Neutrality Roadmap - Key Initiatives; Source: LYB 2024 Sustainability Report.

LYB's main initiatives to address Scope 3 emissions are (a) exiting from the refining business and (b) engaging with suppliers, as highlighted in Figure 6. However, LYB's Scope 3 target only takes into consideration around 82% of its 2020 Scope 3 emissions¹⁸, including emissions from feedstocks and raw material (category 1), energy-related emissions (category 3), upstream transportation (category 4), use of sold products (category 11) and equity investments (category 15).

Overall, the company's Scope 1, 2, and 3 targets boundaries capture ~106,000 KTCO₂e (as shown in Figures 5 and 6) or 85.2% of its 2020 footprint of 124,400 KTCO₂e (Table 1).¹⁹ For a 1.5°C alignment by 2030²⁰, the company will have to reduce its 2020 GHG emissions to approximately 71,440 KTCO₂e by 2030²¹, a total 42.6% decline. From 2024, the company will have to reduce its current emissions²² by even a higher magnitude of 46.6% to achieve the needed level of 71,440 KTCO₂e by 2030.

¹⁸ For its Scope 3 target LYB has a baseline of 83,000 KTCO₂e out of a total Scope 3 footprint of 101,200 KTCO₂e.

¹⁹ According to LYB's 2024 Sustainability Report, its 2020 Scope 1,2 and 3 total footprint stood at 124,400 KTCO₂e, while its emissions reduction roadmap presents a 2020 baseline of 106,000 KTCO₂e, representing 85.2% of the total footprint.

²⁰ As per SBTi's requirements.

²¹ I.e., 2020 operating emissions of 23,000 KTCO₂e under the target boundary would need to become 13,340 KTCO₂e (for a 42% reduction) and Scope 3 emissions of 83,000 KTCO₂e under the target boundary should reach 58,100 KTCO₂e (for a 30% reduction), totalling 71,440 KTCO₂e.

²² LYB's total footprint disclosed in 2024 was 133,900 KTCO₂e.

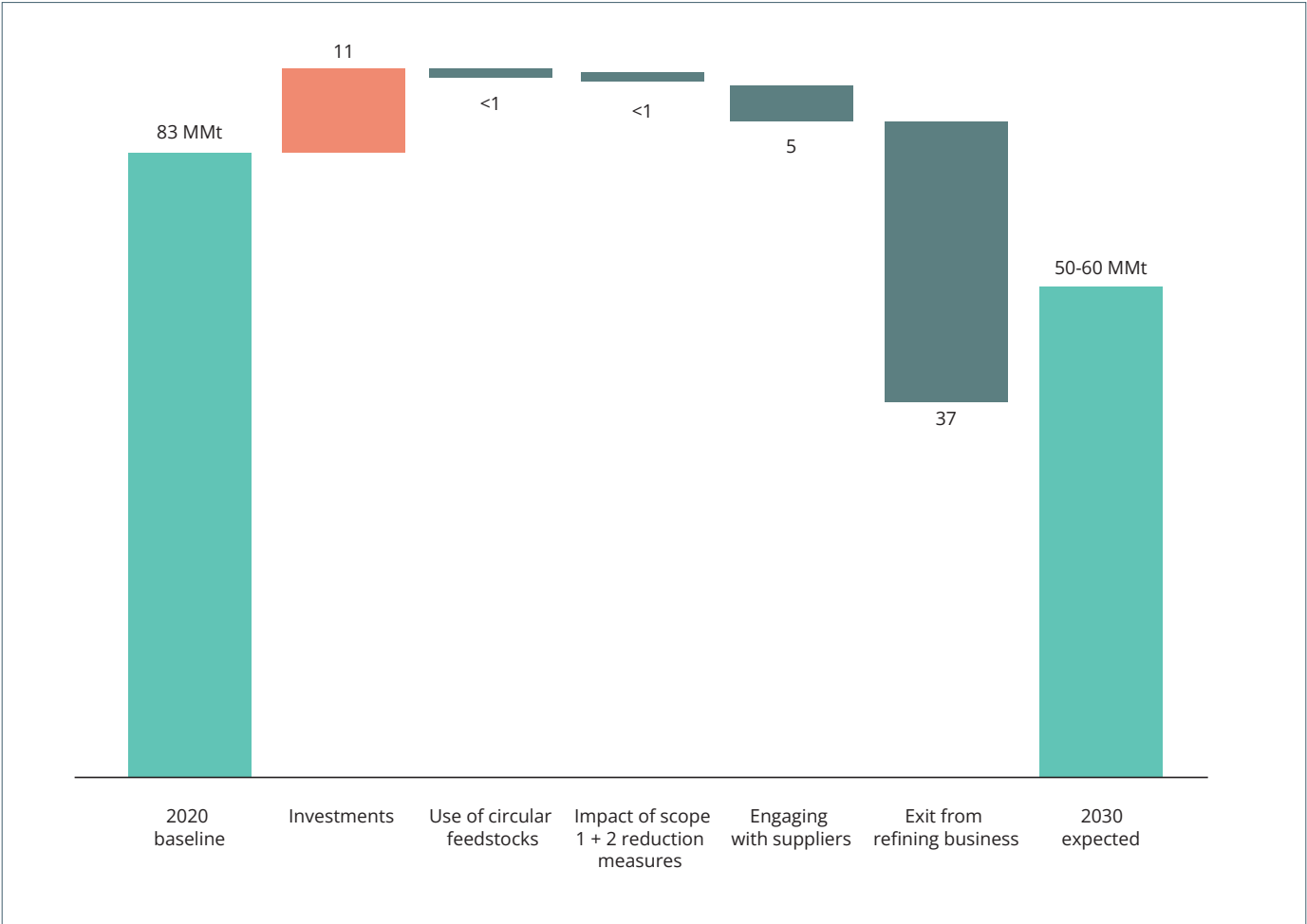


Figure 6: LYB Carbon Neutrality Roadmap - Key Initiatives; Source: LYB 2024 Sustainability Report.

As a result, based on the increased level of emissions in the last years since 2020, without additional mitigation measures it is unlikely for LYB to deliver on its target levels by 2030. In other words, the company needs to upgrade its emissions reduction roadmap to compensate for the current increase in absolute emissions of 7.6%. Otherwise, it risks to drift towards a 2°C pathway alignment instead of the more ambitious 1.5°C by 2030. In the next sections, we will assess the company's planned key mitigation actions to determine LYB's potential to reach its climate transition goals.

Policy and Governance

ENGAGEMENT AND INFLUENCE

Suppliers' Engagement

LYB's supplier engagement program is a critical tool in its Scope 3 emissions management and broader climate transition agenda. The 2024 sustainability report shows the implementation of established tools (i.e., EcoVadis assessments, TfS audits, and collaborative data initiatives), but also a shift toward improving supplier data quality and maturity assessment. However, much of the information remains framed from a corporate narrative perspective, and verification of impacts or measurable emission reductions across the supply chain is not yet evident.

Key Components of Supplier Engagement

- **Sustainable Procurement:** In 2024, LYB assessed approximately 840 key suppliers, achieving coverage of 71% of its key supplier base, defined as suppliers with annual spend exceeding \$1 million. This number cannot be directly compared to the 2023 figure of 1,533 suppliers (or 678 in 2022), as the company revised its reporting approach to group supplier entities under single corporate groups rather than separate assessment units. The company continues to use EcoVadis IQ for due diligence and risk mapping, identifying high-risk suppliers for in-depth review through either an EcoVadis sustainability assessment or a Together for Sustainability (TfS) audit.

Outcome data for 2024 show that 2% of assessed suppliers scored "insufficient" on environmental criteria, consistent with 2023 results, while those scoring "insufficient" on sustainable procurement dropped from 11% to 6%, suggesting an improvement in supplier procurement practices. LYB emphasises that corrective measures remain in place for suppliers below company thresholds.

- **Carbon Reduction Program:** LYB expanded its supplier carbon engagement through its Supplier Climate Maturity Framework, which combines EcoVadis data, internal surveys, and secondary emissions datasets. The company held over 35 bilateral meetings with key suppliers in 2024, securing more than 130 product carbon footprint (PCF) data points; an important step in substituting generic emission factors with primary data for Scope 3 Category 1 (Purchased Goods and Services) calculations.

LYB also participated in the launch of Together for Sustainability's SiGreen platform for digital PCF data exchange, using it to request and collect supplier-level carbon footprint data across its priority material supply chains.

- **Audits and Corrective Actions:** In 2024, 17 TfS audits were conducted among suppliers categorised as high-risk, with the majority of findings related to health, safety, labour, and human rights issues. One supplier relationship was terminated due to repeated refusal to participate in the audit process, demonstrating enforcement of compliance expectations. According to the company, all required corrective action plans were implemented within defined timeframes. LYB also reinforced supplier capacity-building efforts through training activities, with over 300 suppliers participating in technical webinars focused on PCF calculation and emissions reporting, and 387 suppliers completing sustainability courses through the TfS Academy. However, the impact of training on sustainability outcomes is not quantitatively tracked.

In short, LYB's 2024 supplier engagement framework indicates some progress in supplier sustainability performance, particularly in sustainable procurement, expansion in primary carbon data collection and bilateral engagement. However, the company's focus remains largely procedural, with measurable Scope 3 emission reductions yet to be demonstrated. Overall, LYB's supplier engagement program is maturing towards deeper integration of sustainability data, capacity building, and transparency, though quantifiable decarbonisation outcomes remain to be validated as the program evolves.

Customers' Engagement

LYB's customer engagement strategy in 2024 focused on enabling decarbonization primarily by expanding its portfolio of circular and renewable-based polymers, supporting product innovation for customer-specific sustainability targets, and collaborating through industry and downstream platforms. The actual evidence linking these actions to concrete climate transition progress is mixed and reveals important limitations.

Key Components of Customer Engagement

- **Product Portfolio:** The company increased production and marketing of recycled and renewable-based polymers to 203 KT in 2024 (up 65% from the prior year), and maintains a target to produce and market at least 2 million metric tons annually by 2030. According to the company, this target, if achieved, could represent a notable contribution to its decarbonisation, but at present accounts for less than 2% of LYB's total annual polymer production, as the majority of its plastic sales remain fossil-based. The company's narrative emphasises enabling lower-carbon solutions for end-users in packaging, automotive, and related sectors. However, it does not disclose what share of total sales to each sector is covered by these circular solutions.
- **Direct Customer Support:** LYB increased its internal capacity to produce product life cycle assessments (LCAs) and product carbon footprint (PCF) data, aiming to provide full LCAs for the majority of its portfolio by the end of 2026. These tools support downstream customers seeking to manage their own Scope 3 footprints. The company actively participates in industry harmonisation efforts e.g., the World Business Council for Sustainable Development's Partnership for Carbon Transparency (PACT), which, if successful, could improve PCF data transparency and customer decision-making.

In summary, LYB's 2024 customer engagement program is heavily centred on portfolio innovation, namely, increasing circular and renewable polymer offerings and supplying carbon footprint data, both aimed at supporting customer and downstream climate targets. However, the impact of these actions remains largely unsubstantiated from a climate transition perspective. The share of low-carbon solutions across total sales is small, there are no published metrics for downstream Scope 3 use-phase emissions reductions, and most progress is described in the form of ongoing capacity building and case studies, rather than sector-level decarbonisation. The absence of portfolio-wide results or third-party validation of climate benefits for customers suggests these initiatives are, for now, still enabling steps rather than proven pathways to a credible transition.

Influence on Policymakers

LYB engages on climate change policy through a mix of supportive and obstructive activities across the EU and US. The company's high-level narrative endorses climate action, but its detailed engagements reflect selective support for specific policies, particularly where industrial competitiveness or regulation of fossil-based operations is at stake.

Trade Associations

LYB's 2025 *Climate Advocacy Report* expands its trade association disclosures and frames advocacy around "science-based policy and stable regulation". The report presents a relatively full account of alignment assessments but omits certain actively engaged organizations, such as the Tennessee Chamber of Commerce & Industry. The company remains a member of associations known for obstructive climate lobbying, including the American Fuel & Petrochemical Manufacturers (AFPM), the National Association of Manufacturers (NAM), and the American Chemistry Council (ACC). Senior executives sit on the boards of both Cefic and AFPM; organisations that have lobbied against several EU and US climate initiatives, indicating potential conflicts between LYB's stated support for net-zero commitments and the policy influence these bodies exert.

Policy Stance and Engagement

Publicly, LYB voices support for climate action consistent with limiting warming to 1.5°C, the goals of the Paris Agreement, and the role of government regulation to address climate risk. However, the company's lobbying record reveals caveats. CEO Peter Vanacker's 2024 signature of the Antwerp Declaration aligned LYB with an industry-wide call to revise elements of the EU Green Deal and reduce detailed regulatory oversight, underscoring a preference for industry flexibility over prescriptive decarbonization measures. This dual approach of endorsing broad climate goals but seeking to soften real-economy implementation illustrates tension between LYB's strategic discourse and its lobbying conduct.

Direct advocacy positions also demonstrate nuanced but inconsistent support for climate policy. In EU policy dialogues through 2024–2025, LYB expressed conditional approval for the Carbon Border Adjustment Mechanism (CBAM), endorsing expansion to more downstream products while simultaneously pushing to retain carbon leakage protections under the Emissions Trading System without phase-out deadlines. Also, LYB expressed conditional support for policy efforts to create lead markets for low-carbon products, recognising their role in decarbonisation, while at the same asking for caution around measures that could increase compliance costs or erode competitiveness.

The company's positions are most aligned with the Paris Agreement when advocating for renewable energy policies that enable power purchase agreements (PPAs) and market-based mechanisms; although these tend to serve operational cost-management objectives as much as systemic decarbonisation goals.

Circular Economy and Energy Transition

Customer-facing circularity narratives coexist with a regulatory engagement record that selectively resists stricter material controls. In recent lobbying filings, LYB supported circular economy legislation in principle but objected to measures limiting virgin plastic polymer output or tackling hazardous substances under the Global Plastics Treaty. Its preference for promoting biomass- or waste-derived plastics rather than prioritising waste reduction or material recovery deviates from circularity frameworks aligned with the waste hierarchy.

Meanwhile, in the area of energy transition, the company opposed or sought dilution of key clean hydrogen provisions under both EU and US frameworks requesting exemptions for “renewable natural gas” and challenging sustainability requirements for hydrogen tax credits. These positions reveal a focus on preserving existing fossil-linked assets and optionality within emerging low-carbon commodity markets, rather than full alignment with Paris-consistent transition pathways.

In summary, LYB’s climate policy engagement shows a company navigating the policy transition pragmatically yet defensively. While its sustainability reports endorse the 1.5°C ambition and strong governance structures, its policy interventions continue to prioritize competitive safeguards, flexible standards, and incremental market mechanisms over transformative regulatory commitments. Senior-level involvement in industry groups resisting binding decarbonisation measures further weakens the credibility of its pro-climate messaging. In practice, LYB’s approach represents a hybrid strategy: supportive in messaging, cautious in implementation, and selectively resistant where regulatory leverage could directly constrain fossil feedstocks or sectoral output.

MANAGEMENT ALIGNMENT

Sustainability Targets Oversight

The Board

LYB's Board of Directors retains ultimate oversight for sustainability and climate-related objectives through its Health, Safety, Environmental, and Sustainability (HSE&S) Committee. According to the company, the HSE&S Committee regularly reviews risk management processes, strategic alignment of decarbonisation initiatives, and progress on major capital projects (e.g., the MoReTec chemical recycling plant in Cologne), linking sustainability oversight directly to corporate strategy and operational decision-making. The Board also reviews the annual Sustainability Report prior to publication.

The Management

At the management level, sustainability oversight and execution is led by the Chief Executive Officer (CEO) Peter Vanacker. The Executive Committee, including senior executives for Sustainability and Corporate Affairs, and Operational Excellence and HSE, has direct responsibility for embedding sustainability into business planning and performance management. The management team operationalised sustainability strategy through cross-functional governance structures, notably the *Carbon Value Creation and Capture Steering Committee*, the *Sustainability Council*, and the *Net Zero Transition Team*. Together, these internal groups aim to steer decarbonisation projects, oversee emission reduction planning across Scopes, and ensure business units integrate sustainability metrics into execution frameworks. Furthermore, in 2024, the executive leadership linked strategic guidance to implementation through its Value Enhancement Program (VEP).

Management Compensation

Since 2022, LYB has incorporated Environmental, Social, and Governance (ESG) performance into its annual short-term incentive plan (STIP). Under this framework, 30% of the total payout is tied to ESG metrics (20% linked to safety and 10% to sustainability outcomes) while 60% is associated with financial performance indicators such as EBITDA and 10% with value creation objectives. In 2024, the sustainability metrics guiding variable pay focused on measurable targets within energy efficiency, emissions reduction, and circularity expansion.

However, despite this integration at the short-term level, no long-term incentive components are explicitly tied to climate or circular economy performance metrics, a gap noted across the sector as a weakness in sustaining strategic transition alignment. While the existing compensation structure supports operational accountability, its limited horizon restricts long-term behavioural incentives toward decarbonisation and portfolio transformation.

Overall, LYB demonstrates a well-structured governance system linking sustainability oversight from the Board to operational management. The Board-level HSE&S Committee and internal transition teams provide clear accountability channels, while short-term performance metrics connect ESG delivery to financial outcomes. Nonetheless, the lack of long-term incentive alignment with the company's 2030 and 2050 transition goals dilutes the strength of this governance framework. To reinforce credibility, LYB would benefit from explicitly integrating climate transition metrics into long-term executive compensation and from disclosing performance outcomes beyond process indicators, ensuring governance mechanisms drive measurable decarbonisation impact²³.

23 For a comparison of 39 companies involved in the plastic value chain please see "[Plastics – Executive Compensation](#)" which includes a [Best Practice Guide](#).

Risk Analysis

FINANCIAL IMPACT

External Policy Drivers

LYB's disclosures illustrate that regulation-driven costs under the EU Emissions Trading System (EU ETS) is a material climate transition risk, which highlights that carbon regulation from other regions could be a significant future risk. According to its 2025 CDP filing, European operations, which account for roughly a quarter of its total Scope 1 emissions (3,600 KTCO₂e), face an anticipated shortfall of up to 1 million EU Allowances (EUAs) by the end of Phase IV in 2030. The company projects EUA prices could increase from USD 103 to USD 162 per ton by 2030, corresponding to a potential medium-term exposure of up to USD 162 million. Still, LYB highlights that such impacts will vary depending on industrial allocation adjustments, the EU's CBAM roll-out timeline, and potential portfolio restructuring in Europe.

The company's European facilities in Germany, France, the Netherlands, and Italy are directly regulated under the EU ETS and subject to increasing emissions-allowance costs. LYB expects operating expenditures to rise through the next decade as free allowances decline and purchased-allowance volumes increase. While part of this risk is integrated into long-range financial planning, no offsetting revenue benefit or customer pass-through mechanism is disclosed.

Physical Risk Drivers

Beyond regulatory risk, LYB identifies physical climate risks (such as hurricanes along the U.S. Gulf Coast and Rhine River low-water events) and also technology and market transition exposures. However, no company-wide monetary quantification is provided for those categories.

RISK MANAGEMENT

According to the company, LYB integrates transition and physical climate risks into its Enterprise Risk Management (ERM) process, aligning with ISO 31000 and TCFD principles. The ERM framework evaluates risks through quantitative filters triggered by projected EBITDA impacts above USD 100 million, or savings above USD 10 million, allowing the company to classify risks as substantive based on financial materiality.

External Policy Risk Management

LYB's medium-term transition plan focuses on energy efficiency, electrification, fuel switching (including hydrogen integration), and carbon capture and reuse at major European and North American sites. Approximately USD 200 million (representing 10.9% of total capex) were allocated in 2024 to projects supporting climate and circularity objectives. LYB also applies internal carbon pricing of EUR 89 per ton in Europe and USD 42 per ton in the Americas to inform project prioritisation and capital allocation.

Moreover, LYB's Wesseling (Germany) project is presented as a key element of its climate transition plan. The site's phaseout of a coal-fired boiler and introduction of a steam purchase agreement are expected to yield annual emission savings of approximately 130 KTCO₂e, starting in 2025. The project's total response cost is estimated at USD 13.4 million per year: USD 8.2 million for additional electricity purchases and USD 5.2 million for third-party steam. Despite these added costs, LYB views the initiative as strategically essential in its roadmap learnings to reduce carbon-pricing exposure and align with its 42% Scope 1 and 2 emissions-reduction target by 2030.

LYB's 2024-2025 disclosures show specific transition risks and an example of project-level financial impacts. However, broader risk categories, such as physical weather impacts, supply-chain dependencies, and market demand shifts, remain unquantified. While governance structures for climate risk oversight seem robust and increasingly data-driven, the overall financial picture of its climate transition exposure is still incomplete.

Strategic Assessment

CAPITAL ALIGNMENT

LYB's 2024 capital deployment reflects a continued focus on climate transition and circular economy objectives, with sustainability-linked spending forming a growing share of total capex. The company leverages Green Bond financing, project-level capital allocation, and strategic partnerships to fund initiatives aligned with its 2030 emissions and circularity goals.

The USD 500 million Green Bond issued in 2023 was fully allocated by year-end 2024 to projects in circular economy, renewable energy, pollution prevention, and efficiency. Major recipients included the *MoReTec-1* advanced recycling plant, *Cyclyx* sorting infrastructure, and renewable power purchase agreements (PPAs). Construction of *MoReTec-1* in Cologne began in 2024 and is scheduled to process 50,000 tonnes of plastic waste annually from 2026, supported also with EUR 40 million funding from the EU Innovation Fund. The project forms part of LYB's target to market 2 million tonnes of recycled and renewable-based polymers by 2030.

Additional capital was directed to the integration of APK AG's *Newcycling* technology for hard-to-recycle flexible packaging, the expansion of mechanical recycling through ventures in China and the U.S., and equity investments in *Cyclyx* International and *Source One Plastics* to secure feedstock for chemical recycling. These projects enhance the company's circularity infrastructure, but their contribution to absolute GHG mitigation remains undefined, a key gap in linking circular investments to emissions outcomes.

In energy transition, LYB has secured 1,820 MW of renewable capacity under PPAs across the U.S. and Europe, expected to generate 5 million MWh annually and cut Scope 2 emissions by about 1,800 KTCO₂e per year (25% of its current Scope 2 emissions). The company is also advancing hydrogen integration at its Wesseling site in Germany, which will connect to the regional hydrogen network in 2026 as part of the coal phase-out strategy.

Overall, sustainability-related capital expenditures accounted for around USD 200 million (11% of 2024 capex), with plans to increase to USD 268 million (15%) in 2025 as circular and low-carbon infrastructure scale up. Additional venture funding through the LOIM Plastic Circularity and Chrysalix Carbon Neutrality Funds supports early-stage technologies in advanced recycling, carbon capture, and low-carbon chemicals.

LYB's capital alignment demonstrates visible progress toward circular and low-carbon infrastructure buildout, supported by full Green Bond deployment and approximately USD 1 billion in cumulative investments since 2023. However, the absence of mitigated emissions and lack of integration between circularity initiatives and GHG reduction targets weakens the credibility of its transition alignment. Greater transparency on project-level emissions changes and returns would allow investors to evaluate whether the company's circular economy investments meaningfully contribute to its Net Zero trajectory.

TRANSITION APPRAISAL

This assessment reviews LYB's climate transition strategy across emissions performance, policy and engagement, governance, risk management, and capital allocation. The company has strengthened some of its disclosures and made tangible progress in renewable energy procurement, and sustainability related investments and divestments²⁴. However, total emissions continue to rise in 2024, and the weak linkage between circularity and GHG mitigation would limit its likely alignment with a 1.5°C pathway.

Emissions performance: Between 2020 and 2024, LYB's total GHG emissions rose by 7.6%, driven by increases in upstream and downstream Scope 3 emissions, despite moderate declines in Scopes 1 and 2. Rising output volumes largely explain the increase, indicating efficiency and renewable gains have yet to offset growth effects. LYB targets a 42% absolute reduction in Scope 1 and 2 emissions and 30% in Scope 3 by 2030 (among the most ambitious in the chemical sector), but achieving these would require a 46% cut from 2024 levels, given their recent upward trend.

Decarbonisation actions: The company's operational roadmap includes energy efficiency, electrification, renewable power, hydrogen integration, and carbon capture. Recent milestones, such as 1,820 MW of renewable capacity secured through PPAs and the Wesseling decarbonisation project, demonstrate credible delivery steps. Yet, Scope 3 progress remains largely procedural, with supplier and customer engagement still focused on data collection rather than measurable abatement outcomes.

Policy, governance, and risk: LYB's governance framework provides clear sustainability oversight through its Board-level HSE&S Committee, while internal carbon pricing (EUR 89/t in Europe; USD 42/t in the Americas) embeds transition considerations in capital planning. The company also discloses its exposure to carbon-pricing under the EU ETS, which could potentially reach EUR 162 million per year. However, policy engagement remains cautious and pragmatic, and physical-risk quantification is absent.

Capital alignment: LYB's capital allocation shows growing integration of sustainability-linked projects. The full deployment of its USD 500 million Green Bond, the development of the *MoReTec-1* chemical recycling facility, and hydrogen-ready infrastructure at Wesseling underline its commitment to transition investment. Still, circularity projects are not yet tied to measurable GHG reduction metrics, limiting visibility on their contribution to the company's net-zero alignment.

Conclusion: LyondellBasell's transition plan is supported by sensible capital investments, expanding renewable power, and clearer risk management structures. If the company fully delivers on its 2030 emissions-reduction and renewable-energy targets, it could achieve alignment with a below-2°C pathway, consistent with Planet Tracker's *green* category. However, continued growth in Scope 3 emissions, the absence of quantified abatement from circularity projects, and the deferral of large-scale low-carbon technologies could push the company away from a fully credible alignment. So investors should keep a close eye on the company's evolution.

Planet Tracker concludes that LYB will align with a below-2°C warming scenario by 2030²⁵.

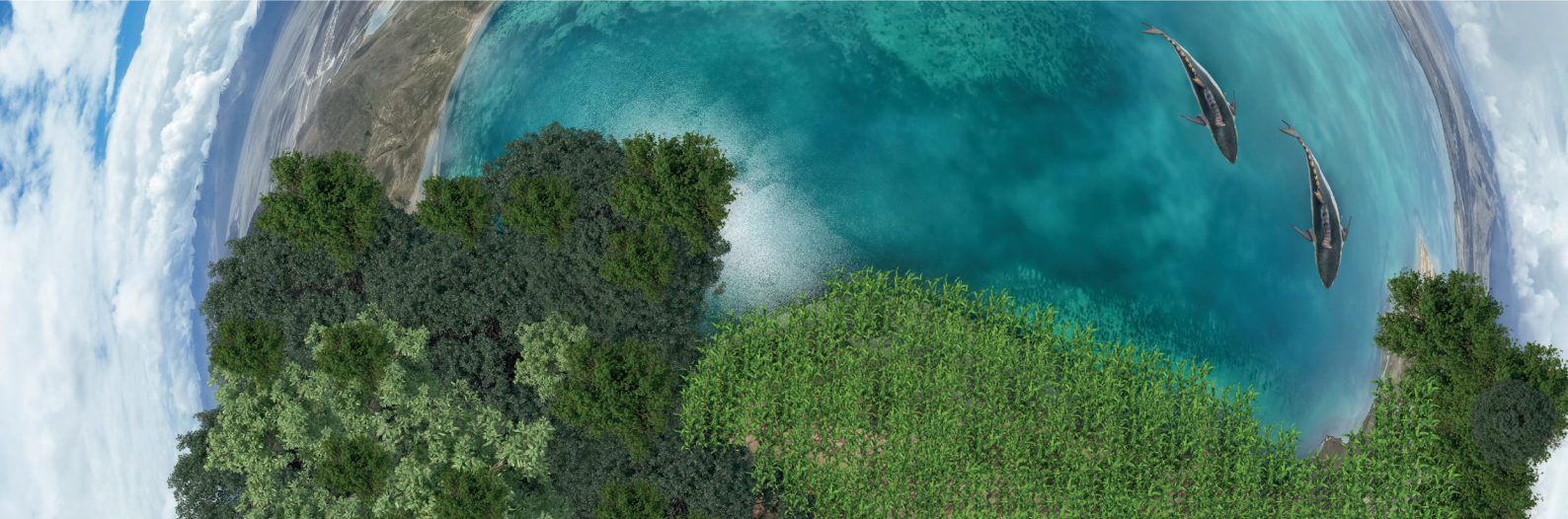
²⁴ LYB completed the full shutdown of its refinery segment in February 2025, with process units fully decommissioned by March 2025. Closing the refining segment would lead to a reduction of 37,000 KTCO₂e in its Scope 3 as highlighted in Figure 6.

²⁵ Based on the data accessed by Planet Tracker until October 2025.

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ABOUT PLANET TRACKER

Planet Tracker is a non-profit financial think tank producing analytics and reports to align capital markets with planetary boundaries. We aim to create a significant and irreversible transformation of global financial activities by 2030. By informing, enabling and mobilising the transformative power of capital markets we aim to deliver a financial system that is fully aligned with a net-zero, nature-positive economy. Planet Tracker proactively engages with financial institutions to drive change in their investment strategies. We ensure they know exactly what risk is built into their investments and identify opportunities from funding the systems transformations we advocate.

PLANET TRACKER'S CLIMATE TRANSITION ANALYSIS

As part of its Petchems programme, Planet Tracker is examining the transition plans of chemical companies covered by the Climate Action 100+ list (<https://www.climateaction100.org/whos-involved/companies>). Our goal is to provide investors with the key information and analysis they need to be able to hold leading chemical companies to account for the quality of their climate transition plans and their execution against those plans. We also encourage investors to use this information to engage effectively with these companies with the ultimate aim of driving the sustainable transformation of the chemical industry.

ACKNOWLEDGEMENTS

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WITH THANKS TO OUR FUNDERS



*Suggested citation:
Visinovski I., LyondellBasell Climate Transition
Analysis, Planet Tracker (2025)*

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