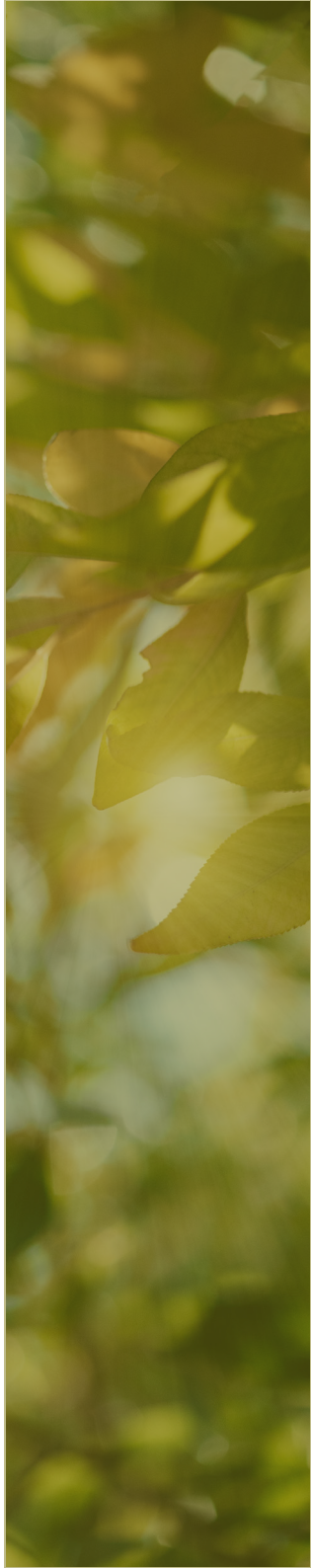
WE MEAN BUSINESS COALITION

# INSIDE THE CSRD CLIMATE REPORTS

The beginning of a new accountability era

# CONTENTS





# INTRODUCTION

**Last year, we published the Early Adopters' CSRD Reporting report.[1] In response, we received a lot of positive feedback, not least of all for how inspiring it was to see interesting and unusual reporting solutions.**

Reporting year 2024 marks the first year that the EU's CSRD came into force for large, listed EU companies, with reports published in spring 2025. From our conversations with companies, auditors – and investors – it's clear there is value in once again reviewing these new reports to understand how companies are responding to the legislation. So, here it is.

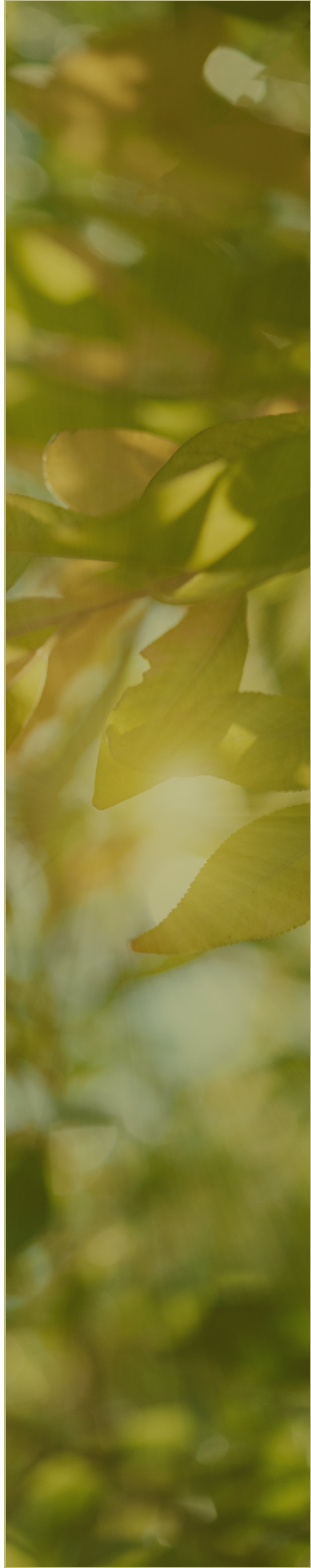
This year, we've chosen to review the CSRD reports of the 100 largest listed EU companies – a shift from last year's approach, where we focused only on 30 CSRD reports we just happened to know of. This allows us to provide some statistical insights. However, while our sample covers approximately 9% of the All-Country World Index (MSCI ACWI) market capitalization as of 31 December 2024 — and is therefore meaningful — we also refer readers to other studies in the market that analyse much larger sets of reports. These analyses are often AI-generated and typically focus on metrics such as how frequently specific IROs are addressed or the number of pages a CSRD report contains. If that's the information you›re seeking, there are plenty of such resources available.

This report is different. Our aim is not to summarize averages or typical reporting practices – but to highlight new, interesting, and unusual reporting solutions that may inspire companies, their auditors, and investors. For this reason, we have deliberately avoided using AI in this analysis. All 100 reports have been manually reviewed and thoughtfully curated by humans.

The overarching goal of the We Mean Business Coalition (WMBC) is to help companies halve their emissions by 2030. That's why we take a particular interest in climate-related reporting – and why this is a central focus for this review. We are equally interested in how capital can be moved to support the most ambitious and green companies. For this, investors and other capital providers need high-quality reporting. Accordingly, we also examine aspects like internal controls, restatements, and assurance within the CSRD reports, just as we constantly look for investor-useful and user-friendly reporting practice.

Not all 100 companies report in particularly new or interesting ways, so we have not included examples from every single report. However, we have provided links to all 100 reports at the end of this publication, so readers can review them in full for themselves. Each chapter begins with a reference to the main regulations and guidelines relevant to the topic – though these are not intended to be comprehensive summaries. We encourage readers to consult the original regulations directly, and we've included links to these in the endnotes.[2] **We hope you find this report inspiring.**

**Disclaimer:** We do not claim that the examples included are 100% aligned with the regulation. Nor do we assert that the content of the reports is valid or sustainable, or that the products or services provided by the companies are sustainable. The examples presented in this report are simply interesting reporting solutions, selected on principle. We hope they will serve as inspiration for many companies – and their auditors – as they consider their own reporting approaches.



# METHODOLOGY AND OVERALL STATISTICS

This report, as noted in the Introduction, is based on a manual review of the Corporate Sustainability Reporting Directive (CSRD) reports from the 100 largest listed EU companies. The selection is based on market capitalization as of December 31, 2024. Only companies headquartered in the EU and listed on an EU-regulated market have been included.

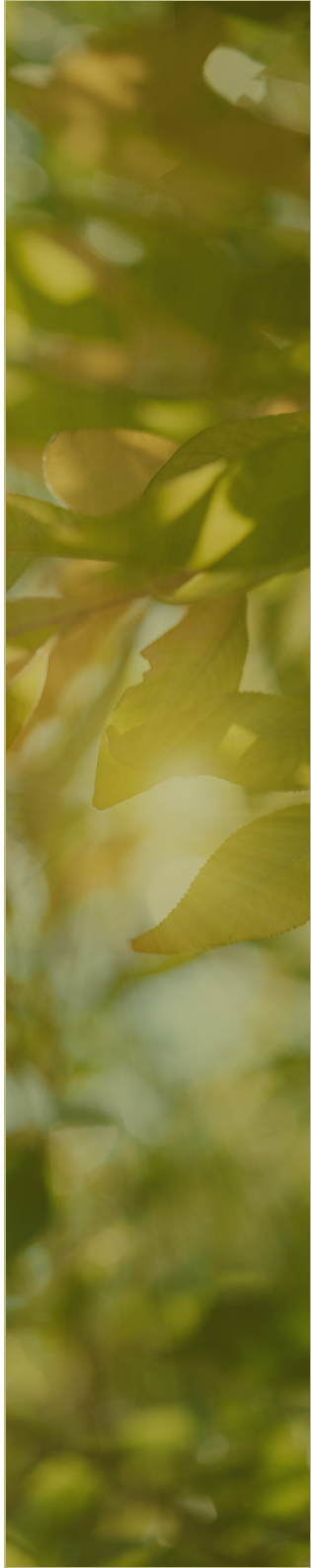
We are aware that 10 out of 30 European Economic Area (EEA) countries have not fully transposed the CSRD. However, we chose to include companies from these countries, nonetheless, as most companies have adopted the CSRD in practice, regardless of whether it has been transposed into local legislation in their country of headquarters.

We excluded 7 company reports—6 Swedish and 1 French—as they did not even partially meet the CSRD requirements and hence are not comparable to the rest of the companies. As a result, the statistical sample includes 93 companies.

The companies in the sample are from the following countries (see table). Those shown in colour indicate countries that per 31.12.2024 had not transposed the CSRD.[3] As shown, the lack of transposition has only had a noticeable effect in Sweden. Also worth noting is that there are no companies from Eastern Europe in the sample, as none were large enough to qualify.

| EEA Countries | Number of companies |
|---|---|
| Austria | 1 |
| Belgium | 3 |
| Denmark | 5 |
| Finland | 2 |
| France | 25 |
| Germany | 21 |
| Italy | 6 |
| Netherlands | 14 |
| Norway | 2 |
| Spain | 11 |
| Sweden | 3 |
| | |
| **Total** | **93** |

We have also categorized the companies according to the Thomson Reuters Business Classification (TRBC) sectors, as assigned by the London Stock Exchange Group. As shown, our sample covers all 10 TRBC sectors – though including just one company from the Real Estate sector. Otherwise, the sample provides a reasonably good representation across all sectors.



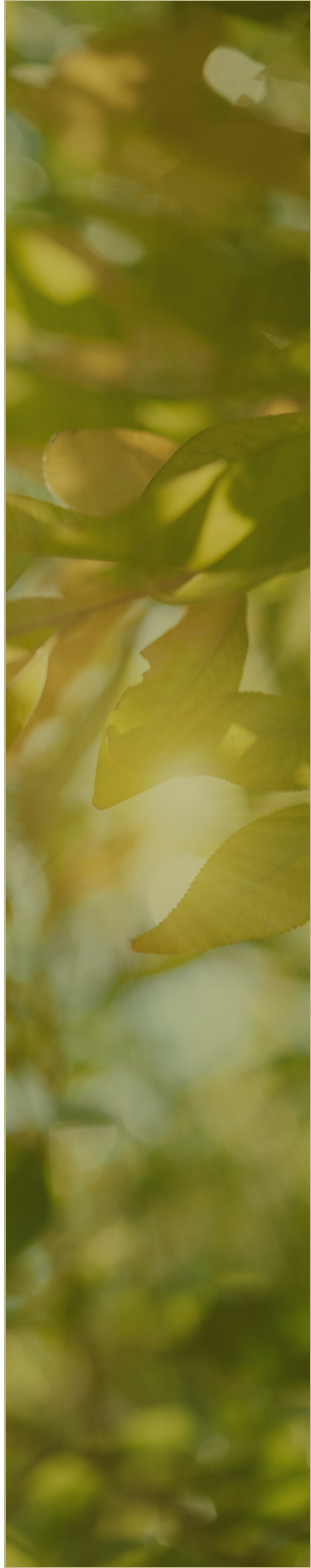
| TRBC sectors | Number of companies |
|---|---|
| Basic Materials | 5 |
| Consumer Cyclicals | 15 |
| Consumer Non-Cyclicals | 6 |
| Energy | 3 |
| Financials | 22 |
| Healthcare | 6 |
| Industrials | 15 |
| Real Estate | 1 |
| Technology | 14 |
| Utilities | 6 |
| | |
| **Total** | **93** |

All reports – including supporting documents such as remuneration reports – have been manually collected from the companies' websites. We also gathered and reviewed the 2023 reports to identify any restatements, as we noticed not all companies are transparent about these.

Since the collection process was entirely manual, we are also able to comment on the speed of reporting across different countries. It appears that French, Italian, and to some extent Spanish companies often report quite late. Typically, these companies publish their "financial results" (though they do not call it an annual report) in January or February, like others, but the formal Universal Registration Document (URD) is often not published until late April – or even in early May in the case of the English version.

While this may not violate the letter of the regulation, it does go against its spirit, which calls for the simultaneous release of financial and non-financial data. This delay is not commonly observed in the Nordics or Germany.

Another notable geographical difference in reporting practices is that reports from Spain and Italy tend to be extremely long and often lack hyperlinks in their index tables. Instead, they rely on static references that users must search for manually, making the reports time-consuming and not user-friendly to navigate.



# ASSURANCE AND INTERNAL CONTROLS

To make reporting useful for investors and other stakeholders, the content must be both valid and complete. To help ensure this in CSRD reporting, the directive requires not only limited assurance but also disclosures regarding internal controls.

In practice, a company is allowed to have no internal controls in place — as long as it transparently reports that fact. This allows investors and other stakeholders to assess the credibility of the information provided. The requirement for reporting on internal controls is outlined in GOV-5: Risk Management and Internal Controls over Sustainability Reporting.

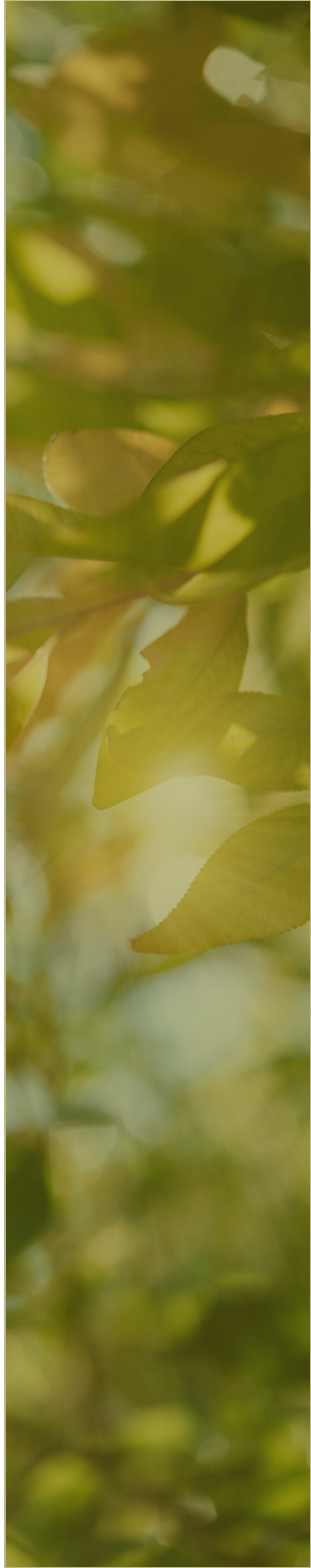
As noted, the required assurance level is limited, but over the past several years, many companies have voluntarily elevated the assurance level of their ESG reporting to reasonable assurance. However, for this first round of CSRD reporting, we observe that many companies who previously received reasonable assurance are now receiving mixed assurance, where some sections are covered by limited assurance and others by reasonable assurance.

| Assurance level | Number of companies |
|---|---|
| Reasonable assurance | 1 |
| Limited assurance | 79 |
| Mixed assurance | 13 |
| No assurance | 0 |
| | |
| **Total** | **93** |

The assurance providers are well known — primarily the Big Four and a few others. In France, Forvis Mazars is also widely used, which is not the case elsewhere in the EU, at least not among the largest listed companies. In France joint assurance is required for the listed companies' financial reports, involving two independent assurance providers. This practice is not required for their CSRD-assurance but is widely used — but rarely used in other parts of the EU.

| Assurance provider | Number of companies |
|---|---|
| Deloitte | 16 |
| KPMG | 14 |
| PwC | 25 |
| EY | 17 |
| Forvis Mazars | 3 |
| Others or joint assurance | 18 |
| | |
| **Total** | **93** |

During the development of the CSRD, there was significant debate about whether to allow assurance providers beyond traditional auditors to conduct assurance on sustainability reporting. In practice, this has not materialized – at least not among the largest, listed companies.



We have observed only a few instances where non-auditors provided assurance — often in France and always in collaboration with another party. Indeed, it is also largely a French approach to have different assurance providers for the non-financial report compared to the financial report. Only 11 of the 93 reports had a different auditor for the non-financial report — 9 of those were in France.

From a practical perspective, it often makes sense to have the same assurance provider. Some of the KPIs reported are integrated (e.g., energy or GHG intensities), and it would be inconvenient, time-consuming — and likely more expensive — to have two separate assurance teams verifying the numerator and denominator of the same KPI.

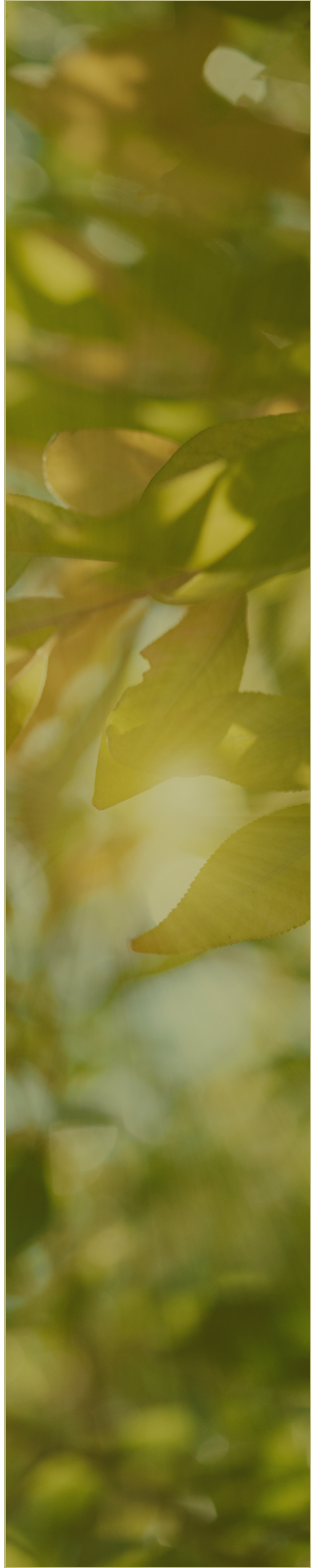
Now, let us look at internal controls reporting. This disclosure requirement is relatively loosely defined, offering companies a variety of ways to meet it. However, GOV-5 is not subject to materiality assessment — it is mandatory. When reporting under GOV-5, undertakings may consider risks such as data completeness and integrity, accuracy of estimation methods, availability of upstream and/or downstream value chain data, and the timing of data availability.

In the following, we present some noteworthy examples. Many companies have not yet fully established their internal control systems, and several have been open and transparent about this — a level of honesty that is highly appreciated. See, for example, Universal Music Group (p. 83), where they openly outline a plan to establish a robust control environment:

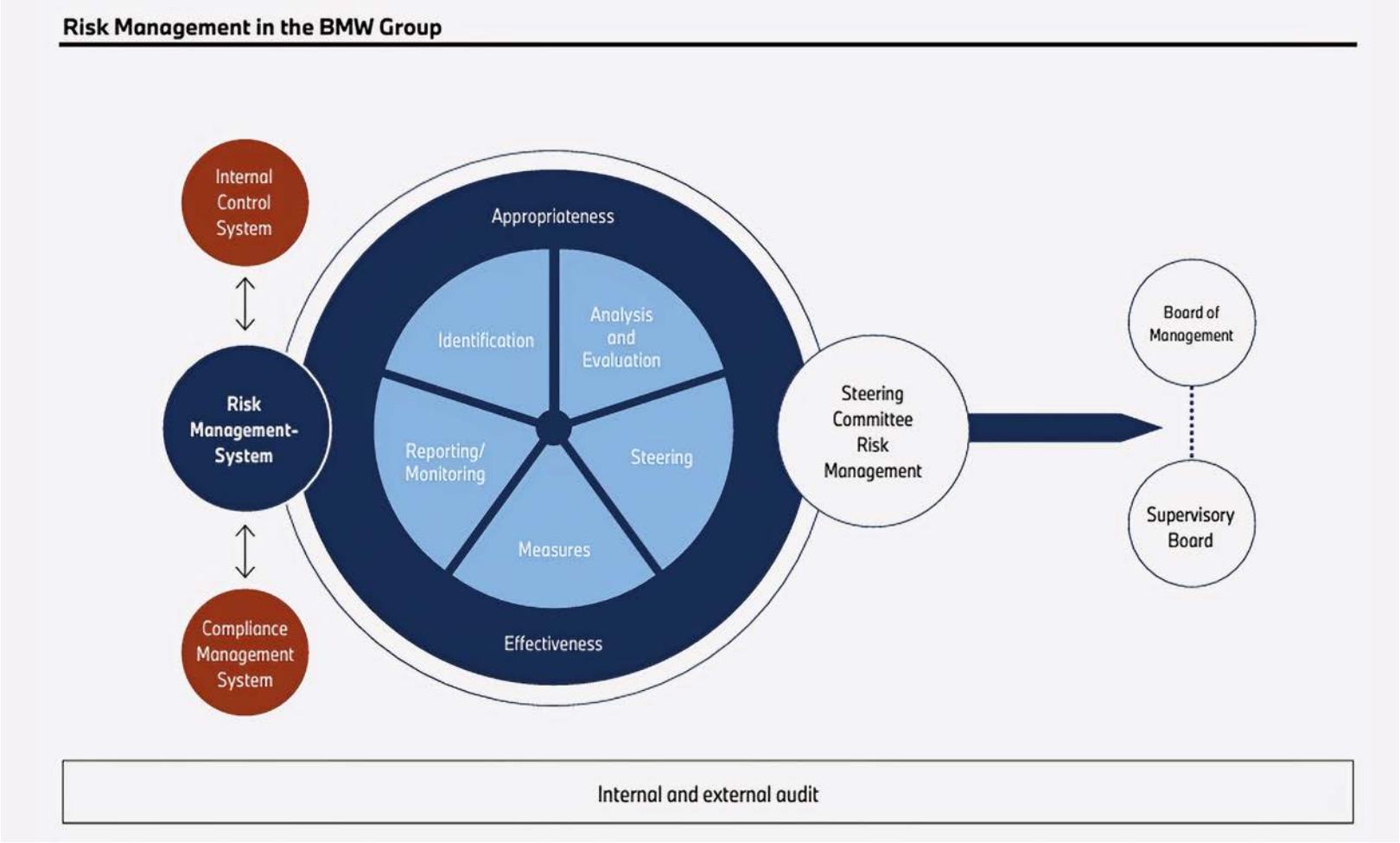
**Continuous ICF Improvements**

Management continues to invest in the further improvement of the risk and internal control systems in the Company. Through upgrading its systems (including computer hardware infrastructure), adding additional financial and management controls as well as enhancing reporting systems and procedures. Management will continue to make further improvements in 2025, which will be aimed at, amongst other things:

- Enhancing program management controls for companywide IT system implementations.
- Optimizing the risk and control framework related to non-financial reporting (i.e. ESG).
- Deploying initiatives aimed at standardizing and automating processes and controls.
- Optimizing the level of monitoring of the risk and control systems, including enterprise risk management and a coordinated risk assurance process.
- Continue improving the quality and in particular the level of documentation of key controls across primary business processes.



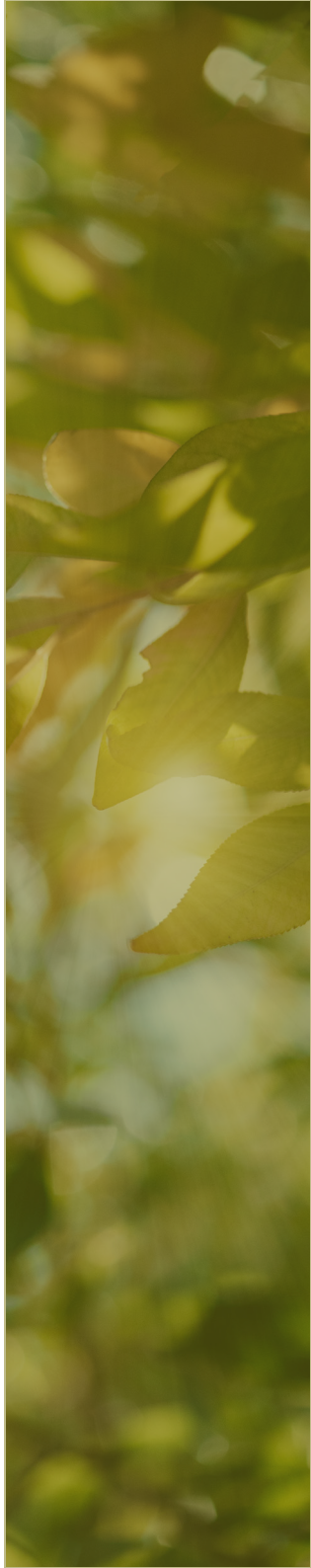
Some companies also provide a helpful overview of how their internal control setup aligns with other risk and control elements — often financial — within the organization. See this example from BMW (p. 249). BMW has chosen having integrated its financial and non-financial internal control functions and for applying the "Three Lines of Defence" model, which many companies consider the most effective and efficient approach.



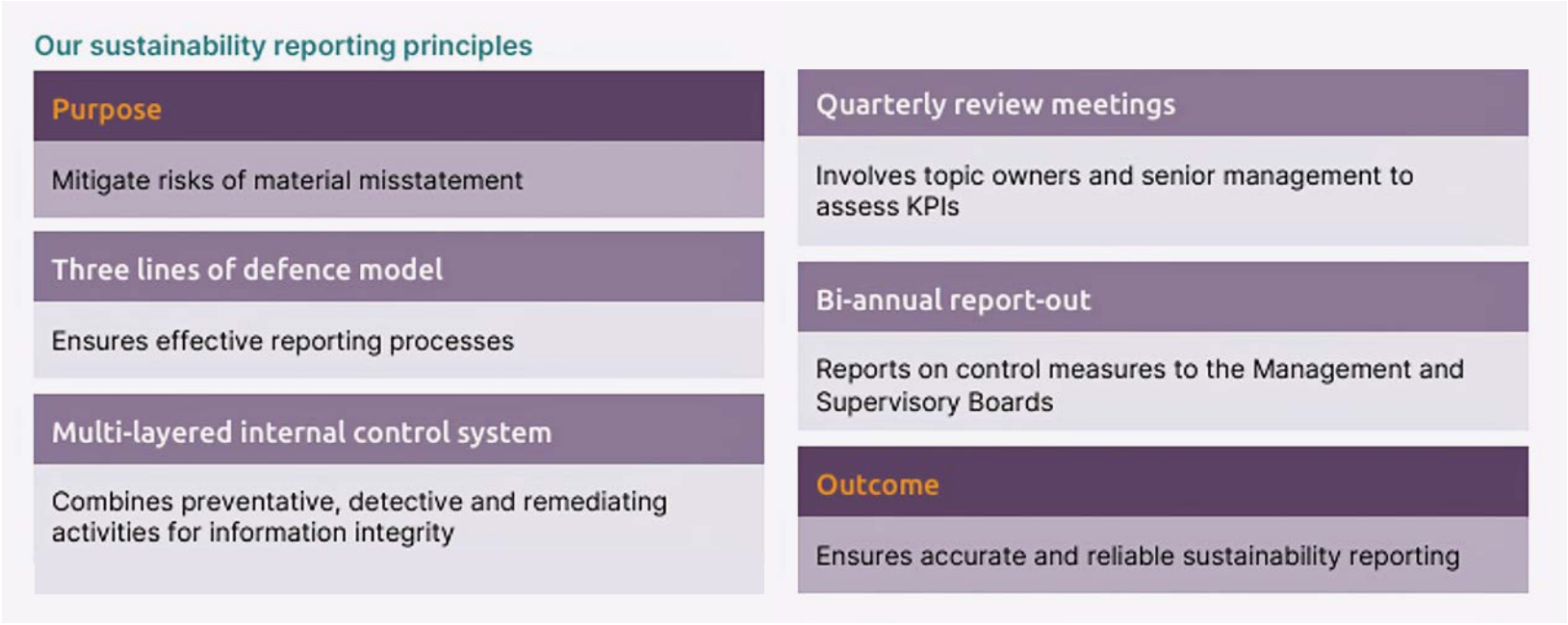
Note how the BMW model is also integrated with the Enterprise Risk Management (ERM) framework — a connection also seen in Rheinmetall (p. 93), which also in its reporting highlights the potential link between internal controls and its materiality assessment.

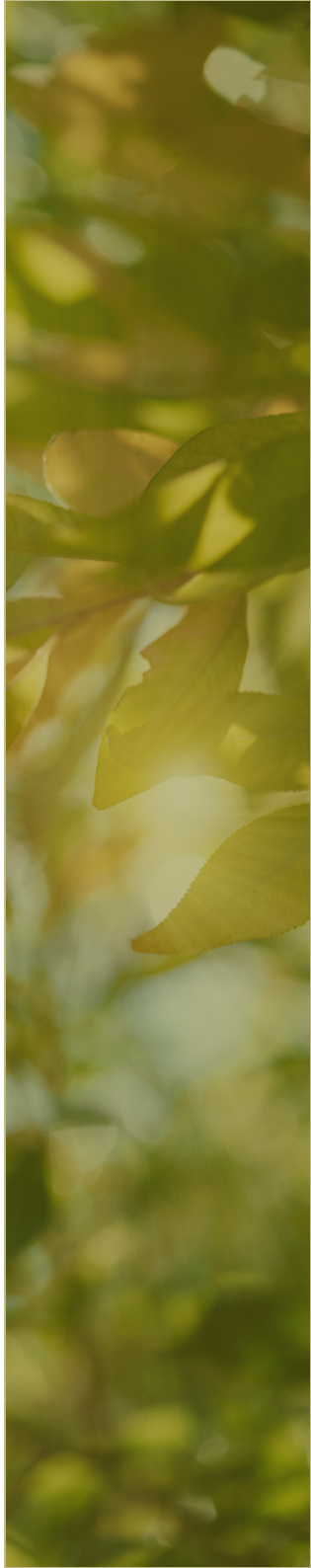
The interaction of the risk management system, the internal controls and the double materiality analysis in the context of sustainability reporting is shown in the following figure.

Interaction of risk management, ICS and double materiality analysis

Others report on the principles they have used for designing their internal controls — see this overview from ASM (p. 58):

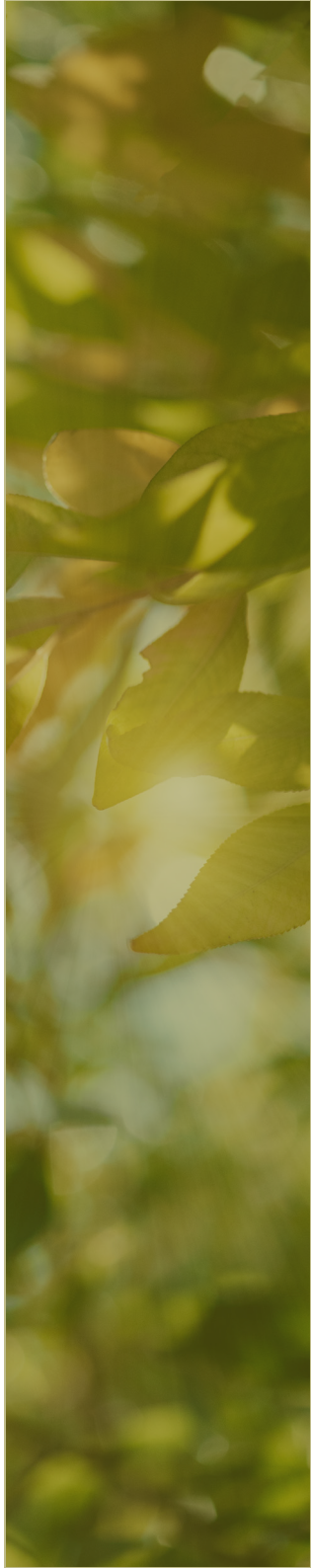


Some focus on the risks that the controls are intended to mitigate and, accordingly, explain the mitigation activities they have developed — see this example from KBC (p. 143):

**Risk related to sustainability reporting processes**

| Type of risk | Description | Mitigation of risk |
|---|---|---|
| Regulatory risks | Changing external regulatory frameworks and evolving standards can put increasing pressure and non-compliance can result in regulatory fines. | We closely monitor the regulatory landscape and corresponding guidance |
| Data quality and verification risks | External sustainability data often lacks standardisation, making it challenging to ensure consistent and comparable reporting. Low data quality can lead to immature disclosures | We work with trusted ESG data partners and perform checks on input data. Since 2022, sustainability data is managed via KBC's dedicated Data & Metrics project (with a separate Steering Committee), involving all core countries and group functions |
| Legal, compliance and reputational risks | Risk of greenwashing | The information in this statement is based on factual information and subject to internal controls, including the four-eyes principle |
| Operational risks | Sustainability reporting has to be integrated into existing systems, processes and reports which is a complex task that – without proper automation – can lead to inefficiencies and manual errors. | We aim to further automate our sustainability reporting processes. Our Data & Metrics Steering Committee manages the challenges related to sustainability data collection and sustainability reporting |

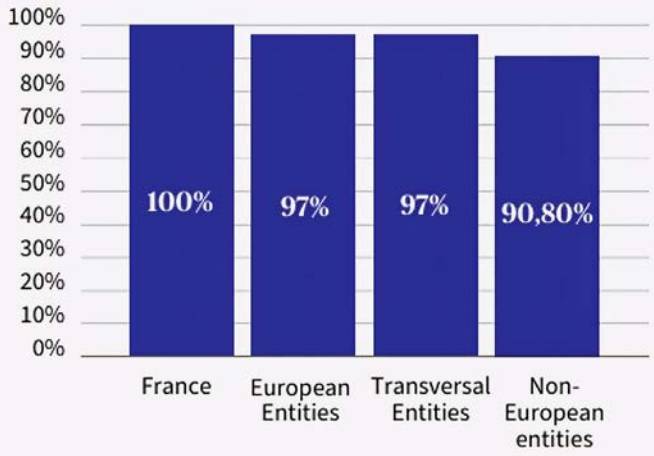


Finally, a notably bold example of reporting comes from AXA (p. 285), where they disclose the outcomes of their monitoring of controls and the geographic compliance rates — something few companies currently do.

The results of the AESI conducted in 2024 disclosed:

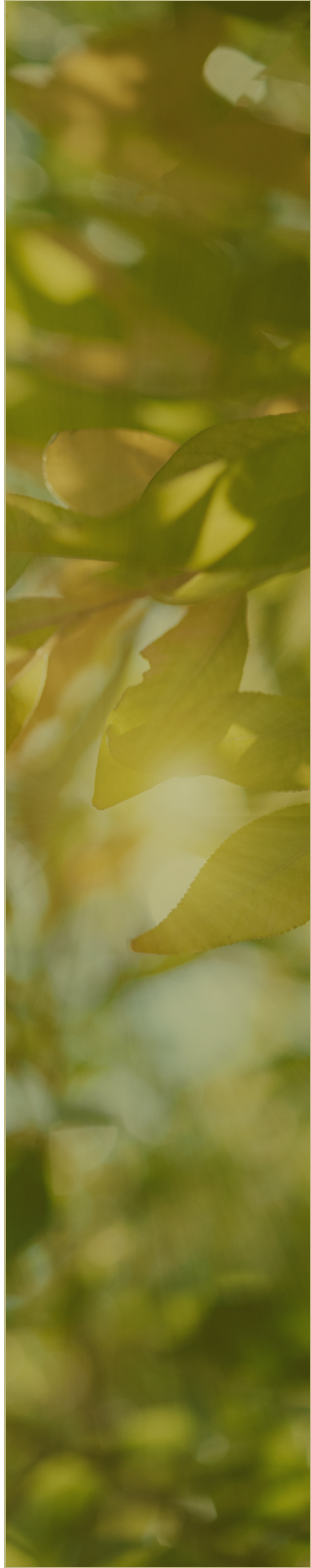
- 15 out of 32 entities that participated to the AESI were fully compliant with all the requirements of the Vigilance Plan.
- 15 out of 32 entities were compliant between 85% and 99% with all the requirements of the Vigilance Plan. These entities were asked to prepare and implement remediation plans to be in compliance on all the requirements.
- 2 out of 32 entities were compliant with less than 63% of all the requirements of the Vigilance Plan. These two entities, in the Africa region, will be subject to special monitoring to support them in the implementation of their remediation plans.

The breakdown of the compliance rate by geographical region of entities is set out below:




**If you're unsure how your company should approach the internal control setup, we recommend reviewing the guideline developed last year by us in collaboration with the International Federation of Accountants (IFAC) and supported by the Global Accounting Alliance (GAA). This framework builds on existing financial processes and systems to create a robust internal control environment that improves data quality while making assurance work more streamlined and efficient. See more here:**
Streamline your ESG Reporting with robust internal controls - We Mean Business Coalition





# QUALIFICATIONS AND RESTATEMENTS

Given the newly mandated limited assurance, many expected to see a significant number of qualifications — which are issued when the assurer has concerns about specific datasets. However, this is not the case; only a few qualifications have been observed.[4] Instead, what we are seeing is that 9 out of 10 companies either erased their historical comparison data or restated it — often significantly (see more in the chapter on GHG reporting).

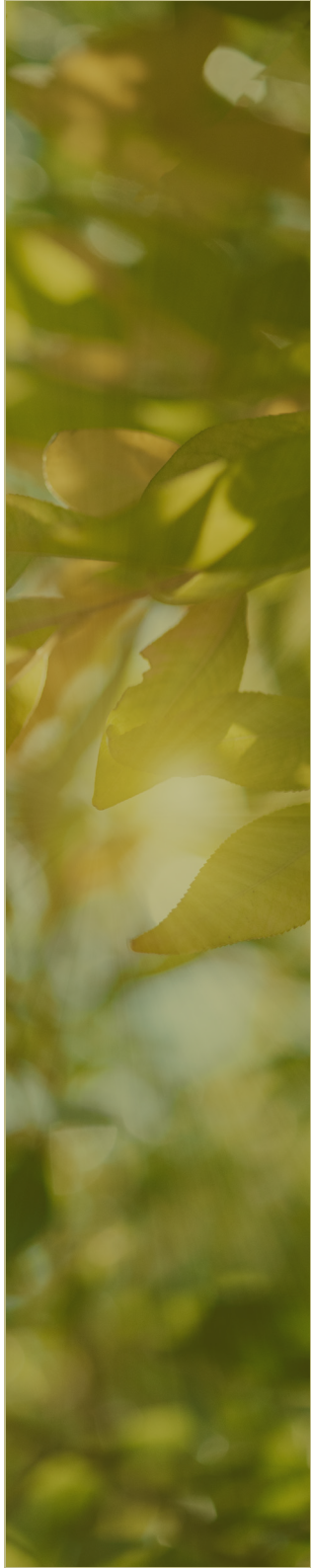
| | Number of companies |
|---|---|
| Comparison restated | 48 |
| Comparison erased | 35 |
| Comparison is appropriately unchanged. | 6 |
| Comparison remains strangely unchanged, despite the clear change in accounting principles. | 4 |
| | |
| **Total** | **93** |

There is nothing inherently wrong with restating or erasing comparison data — both are permitted and can even reflect positively on a company. It may indicate that the company has acknowledged the previous data was of poor quality and/or that reporting requirements have since changed. In that sense, restating can be a positive sign of accountability and improvement.

Typically, a company will choose to restate if it is mature, has a solid understanding of its calculations, and is able to explain the changes. Such companies are often also willing to obtain assurance for the restated comparison data — although not always, as we've also seen cases where assurance was provided with disclaimers stating that comparative data was not covered. In contrast, companies that simply erase historical data often do so because it is easier, faster, and less costly. These are valid considerations — but we recommend also reviewing the chapter on Plans and targets before deciding on this approach.

During our review, it also became clear that there are no firm rules governing when restatements must be made. ESRS 1 (7.5, 96) only states that material prior-period errors must be corrected by restating comparative amounts — unless impractical. However, what qualifies as a "material" error or what constitutes "impracticability" is not clearly defined. Moreover, the restatement requirement does not apply to periods before the first application of CSRD, which obviously weakens comparability and the ability to explain developments. This is likely why around half of the companies did restate their comparison data.

However, not all companies clearly report on the restatements they have made. In many cases, we identified restatements only by comparing the 2024 reports with their 2023 reports. This practice of not providing information about restatements is neither appropriate nor user-friendly, and would be unacceptable in financial reporting. So, in this chapter, we include examples of companies that have reported their policies for restatements and perhaps also the impact of these restatements.

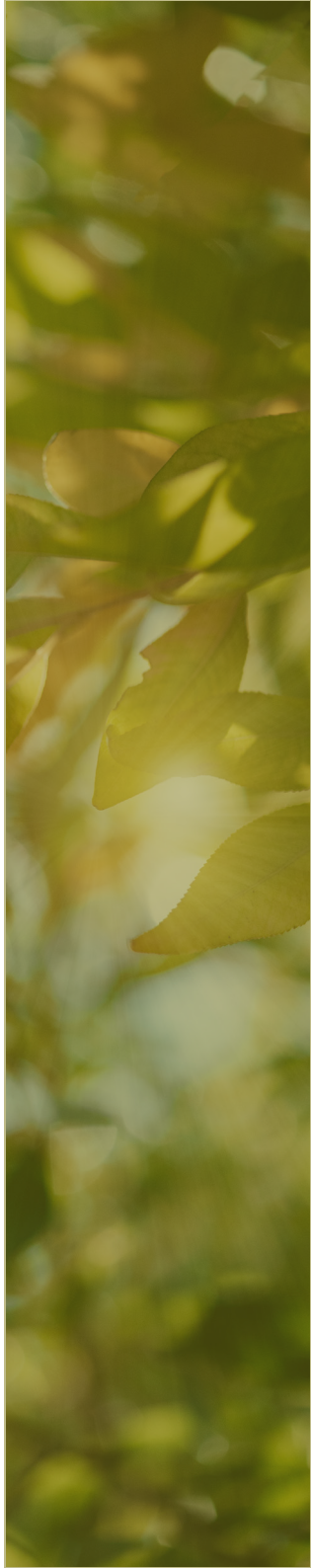


The first example is from KBC, which has published a recalculation policy (p. 183):

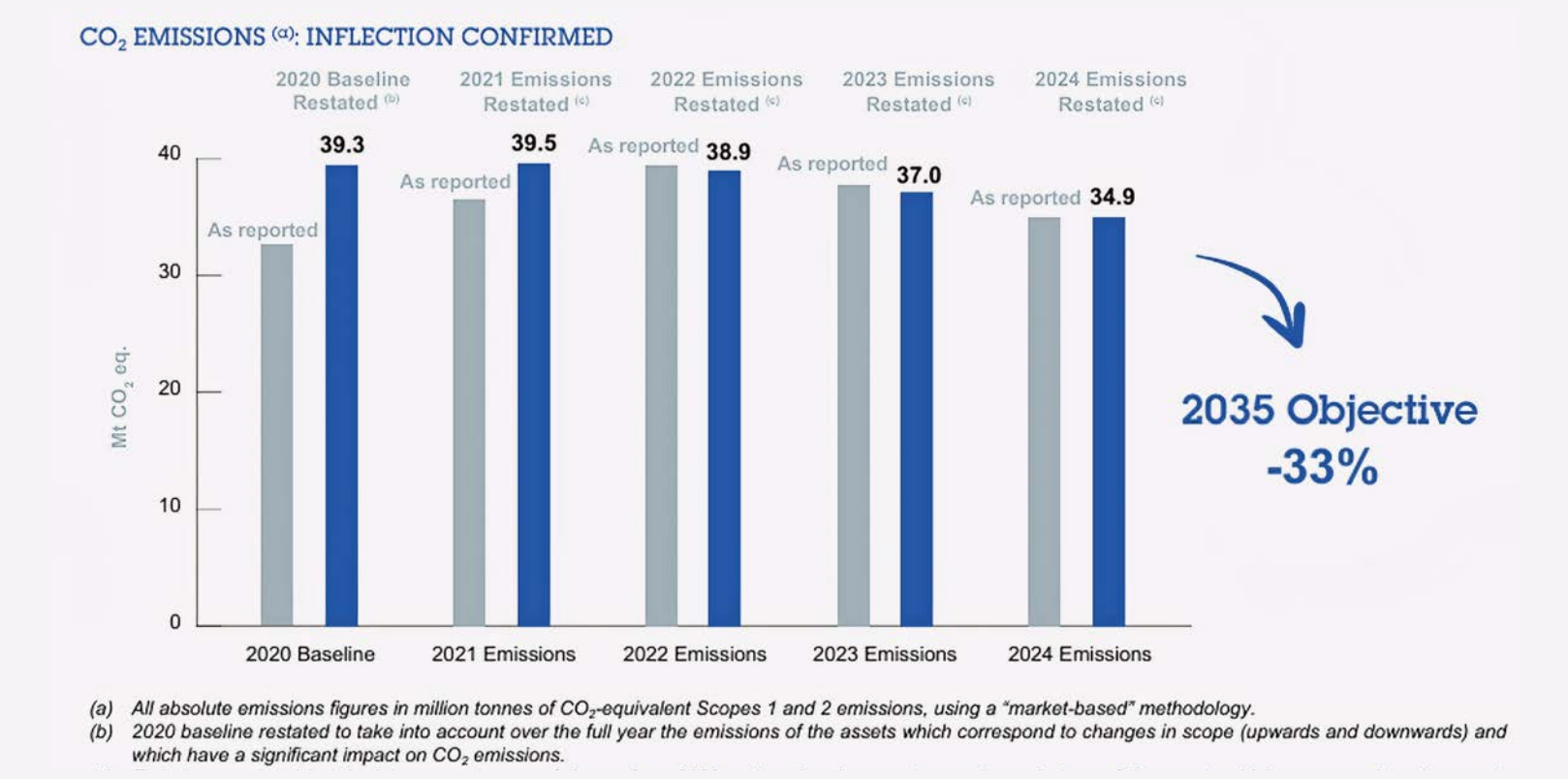
> In 2023, we put a Recalculation Policy in place for both our own carbon footprint as well as for our loan portfolio climate targets. The procedure is based on the Greenhouse Gas Protocol. In general, we aim for continuity in the baselines we use to assess the direct and indirect greenhouse gas emissions targets. Three situations can possibly trigger a base-year recalculation:
> - Structural non-organic changes via acquisitions, divestures or mergers;
> - Calculation methodology changes, including changes in the assumptions used;
> - The discovery of data, calculation or methodological errors.
>
> Improvements in data quality are not part of our recalculation criteria. An evaluation to recalculate the base year is triggered if the assessment shows that the cumulative effect(s) of these three situations in scope exceed(s) a threshold of 5% change versus the actuals of a KPI. The Recalculation Policy is described in section 2.2.2.1.

BBVA (p. 35) has provided the following overview of changes in the accounting principles applied to their sustainability information:

> ## Changes in the preparation and presentation of sustainability information
>
> For the preparation and presentation of the sustainability information for 2024, the Group has implemented the following main changes compared to the 2023 financial year:
>
> - Disclosure standard used to comply with the requirements of Law 11/2018: BBVA complies with the requirements of Law 11/2018 taking as reference the ESRS, unlike in 2023 where compliance was based on the GRI[12] framework.
> - Decarbonization targets: In 2024, BBVA has published new decarbonization targets for three additional sectors, aluminum and residential and commercial real estate in Spain (for more information, see the chapter "Climate Change" in the "Environmental Information" section).
> - Scope 3 emissions: The measurement boundary for the published Scope 3 emissions has been expanded (for more information, see the "Climate Change" section within "Environmental Information").
> - Gender Pay Gap: The information required by Law 11/2018 to calculate the pay gap has been supplemented with the gender pay gap required by the ESRS (for more information, see the "Own Workforce" chapter in the "Social Information" section).
>
> This report includes comparative information except in those cases where the information required by the ESRS was not disclosed in prior periods.
>
> No material errors from previous periods have been identified, nor have data been recalculated beyond what is expressly mentioned in this report.



Air Liquide (p. 61) has provided the following overview to illustrate the impact of their restatements.




Erste (pp. 271–272) has provided an overview of the restatements made to both the base data for their targets and comparison data related to financed emissions.

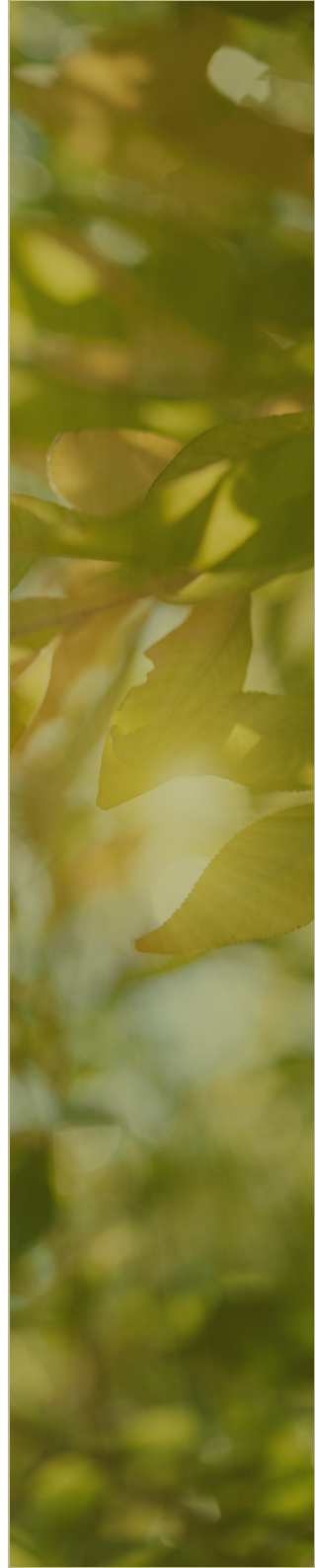
**Restatement**

Erste Group is restating financed emissions of the base year and the previous year in case:

— a significant methodological change leads to a deviation of +/-5 % of financed emissions in the reporting year vs. base year

— a detected error leads to a deviation of +/- 5 % of financed emissions in the reporting year vs. base year

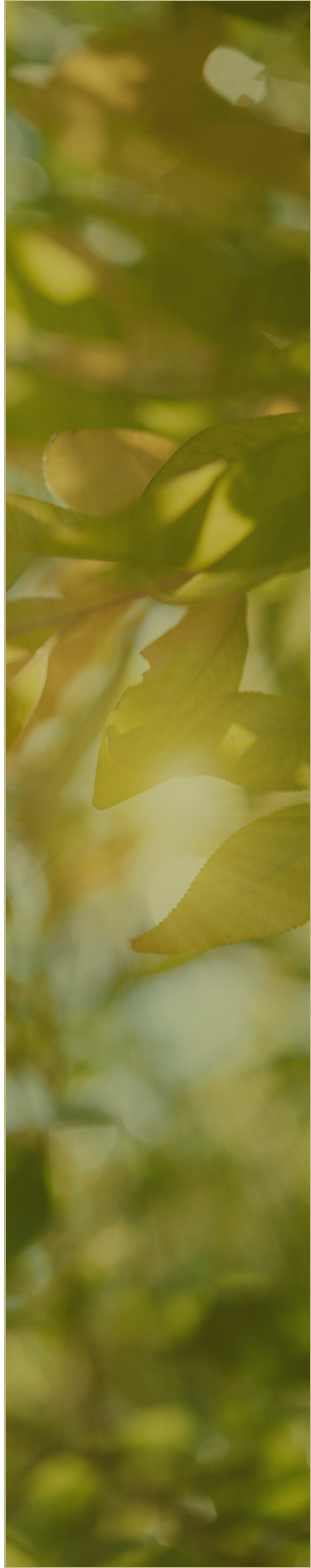
| | Base Year 2022 | | | Restatement 2023 | | |
|---|---|---|---|---|---|---|
| | Financed emissions thousand $tCO_2e$[1,2] | | Emission intensity | Financed emissions thousand $tCO_2e$ | | Emission intensity |
| | scope 1 and scope 2 | scope 3[3] | $tCO_2e$/ EUR million | scope 1, 2 and 3 | scope 3[3] | $tCO_2e$/ EUR million |
| **By PCAF asset class** | | | | | | |
| Corporate bonds | 313 | 564 | 423 | 226 | 274 | 420 |
| Business loans | 9,840 | 17,110 | 363 | 3,852 | 8,905 | 318 |
| Project finance | 349 | 129 | 209 | 168 | 94 | 209 |
| Mortgages | 2,987 | - | 41 | 571 | - | 19 |
| Commercial real estate | 689 | - | 25 | 342 | - | 21 |
| **Total** | **14,178** | **17,803** | **179** | **15,044** | **20,816** | **194** |
| **By sector** | | | | | | |
| Natural resources and commodities | 3,093 | 3,247 | 701 | 3,013 | 2,626 | 603 |
| Energy | 3,644 | 2,625 | 784 | 4,009 | 2,942 | 849 |
| Construction | 1,192 | 2,249 | 466 | 1,341 | 2,456 | 477 |
| Automotive | 239 | 1,598 | 327 | 230 | 2,013 | 387 |
| Cyclical consumer goods | 454 | 842 | 232 | 443 | 956 | 246 |
| Non-cyclical consumer goods | 588 | 2,429 | 439 | 645 | 3,171 | 543 |
| Machinery | 279 | 1,748 | 610 | 390 | 2,494 | 758 |
| Transport | 298 | 586 | 219 | 327 | 1,248 | 350 |
| TMT | 143 | 470 | 142 | 149 | 495 | 151 |
| Healthcare and Services | 355 | 824 | 158 | 348 | 966 | 162 |
| Hotels and Leisure | 241 | 379 | 81 | 261 | 505 | 99 |
| Real estate | 932 | 583 | 41 | 979 | 755 | 43 |
| Public sector | 2 | 6 | 21 | 5 | 25 | 87 |
| Financial institutions | 37 | 116 | 49 | 21 | 66 | 34 |
| Private customers | 2,682 | 100 | 41 | 2,882 | 97 | 43 |
| Other sectors | 1 | 1 | 63 | 1 | 1 | 80 |
| **Total** | **14,178** | **17,803** | **179** | **15,044** | **20,816** | **194** |



VW (p. 292) has made a clear effort to explain the updates to their Scope 3 calculations.

**VOLKSWAGEN GROUP**

| Scope 3 category | Unit | 2024 | 2023 | Notes |
|---|---|---|---|---|
| Total Scope 3 GHG emissions | million tons of $CO_2e$ | 408.58 | 429.12 (413.95)[1] | The previous year's figure was adjusted as part of the recalculation of the base year. |
| Category 1: Purchased goods and services | tons of $CO_2e$/% | 87,346,897 / 21.4 | 94,907,875 / 22.1 (89,572,138 / 21.6)[1] | The category 1 $CO_2e$ emissions relate to the supply chain emissions of all passenger cars and light commercial vehicles produced in the reporting year. They were calculated on the basis of 72 production-volume-weighted life cycle assessments (LCAs). All vehicle LCAs for passenger cars and light commercial vehicles have been independently certified in accordance with ISO 14040/44, mainly by TÜV NORD CERT GmbH. Key drivers of change include portfolio and regional shifts and lower production figures. The previous year's figure was adjusted as part of the recalculation of the base year.<br>The Volkswagen Group uses the electricity grid mix as standard for assessing the production phase of vehicles and, at the same time, includes certificates for renewable energies from suppliers to highlight common decarbonization efforts. This combination of location-based and market-based approaches may result in slight double counting of the proportion of renewable energy. A fully market-based approach will be possible as soon as the relevant emission factors are available in the databases the Volkswagen Group uses.<br>Figure in the base year (2018): 96,763,132 tons of $CO_2e$ |
| Category 2: Capital goods | tons of $CO_2e$/% | 9,712,587 / 2.4 | 9,182,158 / 2.1 (5,716,214 / 1.4)[1] | The calculation of emissions from capital goods is based on financial data from the Volkswagen Group and the use of emission factors. These have been adjusted for inflation since the 2023 reporting year. With effect from the 2024 reporting year, a new data source has been used for the emission factors because the original data source is no longer available. The previous year's figure was adjusted as part of the recalculation of the base year.<br>Figure in the base year (2018): 10,180,382 tons of $CO_2e$ |
| Category 3: Fuel- and energy-related emissions (not included in Scope 1 or 2) | tons of $CO_2e$/% | 1,338,434 / 0.3 | 983,498 / 0.2 | Energy consumption across the Volkswagen Group is recorded annually in the internal EIS and converted into $CO_2e$ using emission factors for the various energy sources from a representative generic database.<br>With effect from the 2024 reporting year, the emission factors have been differentiated by region, where possible.<br>Figure in the base year (2018): 1,510,068 tons of $CO_2e$ |



Finally, ASM (p. 201) has provided this overview, explaining the updates to individual accounting principles and showing the impact of each update per KPI.

## 31.3 Restatements of historic figures

**As part of our commitment to continuous improvement in reporting, we have revised several historic sustainability results in the 2024 Annual Report. We also restated 2023 figures in our EU Taxonomy disclosures due to a found error. The updates incorporate enhanced methodologies and the latest available data to ensure comparability across reporting periods.**

### Energy and Scope 1&2 KPIs

The 2023 Energy and Scope 1&2 KPI data has been restated to incorporate actual invoice data received subsequent to the initial reporting period. Additionally, calendarization was adopted for enhanced allocation of energy consumption to specific reporting periods. To offset increased consumption, supplemental energy attribute certificates (EACs) were procured, and these are reflected in the updated 2023 figures detailed in Chapter 33.

### Scope 3 metrics

Consistent with the GHG Protocol, we have re-baselined our Scope 3 metrics using the latest available methodologies. The most significant change resulted from updates to the ASM product energy consumption database, which directly enhanced the accuracy of our Category 3.11 (Use of Sold Products) emissions calculation.

A further significant change impacted Category 3.1 (Purchased Goods and Services), where we transitioned to a new emission factor database as part of our implementation of a new environmental database platform to improve reporting efficiency and maintain consistency of application of emission factor across geographies.

The changes in reported GHG values described above are summarized as follows.

**Restatement GHG values**

| | Old value | New value |
|---|---|---|
| Electrical Consumption 2023 (MWh)* | 74,432 | 76,371 |
| Energy intensity 2023 (MWh/million EUR) | 33 | 33.8 |
| Scope 1 2023 ($ktCO_2e$) | 2.5 | 2.4 |
| Scope 2 (location-based) 2023 ($ktCO_2e$) | 32.3 | 32.8 |
| Scope 3.1 2021 ($ktCO_2e$) | 402.2 | 311 |
| Scope 3.11 2021 ($ktCO_2e$) | 1,354.6 | 1,321.1 |

**For restated 2023 values of the energy sources, please refer to section 16.4, Table: Energy Consumption and Mix.*

### Avoided GHG emissions through CKM materials savings (tonnes $CO_2e$)

Prior year GHG avoidance values have been updated to reflect additional data received after the original reporting period. These have increased the total GHG avoidance value for prior years, fully covering the positive impact of ASM's refurbishment program.

The changes in reported GHG avoidance from the CKM refurbishment program values are summarized as follows.

**Restatement GHG avoidance from CKM ($mtCO_2e$)**

| | Old value | New value |
|---|---|---|
| 2020 | 36 | 81 |
| 2021 | 775 | 916 |
| 2022 | 1,620 | 1,807 |
| 2023 | 1,650 | 2,127 |

### Supply chain-related metrics

To ensure consistency, the scope of prior years' supply chain metrics has been adjusted to align with the 2024 criteria for identifying relevant suppliers.

The changes in values reported in the 2023 Annual Report for the year 2023 are summarized as follows.

**Restatement supplier spend 2023**

| | Old Value | New Value |
|---|---|---|
| **Total direct supplier spend by region** | | |
| Asia | 68 % | 74 % |
| North America | 23 % | 19 % |
| Europe | 9 % | 7 % |
| **Conflict minerals** | | |
| Total # of surveyed suppliers | 84 | 70 |
| # of suppliers with high risk SORs reported | 27 | 24 |

### Water KPIs

As part of ASM's continuous improvement of reported metrics, ASM has updated its estimation factors for site water usage where the actual utility consumption data is unavailable.

The changes in water withdrawal reported values are summarized as follows.

**Restatement water withdrawal ($m^3$)**

| | Old value | New value |
|---|---|---|
| 2020 | 121,000 | 140,506 |
| 2021 | 198,000 | 175,774 |
| 2022 | 194,000 | 168,517 |
| 2023 | 252,000 | 221,406 |

### Waste-related metrics

ASM has updated its reported waste to landfill values, as we gained new insights that enable us to distinguish waste handling methods in more detail, specifically measuring the amount of our non-hazardous waste that was incinerated.

The changes in waste to landfill reported values are summarized as follows.

**Restatement waste to landfill (metric tons)**

| | Old value | New value |
|---|---|---|
| 2020 | 156 | 56 |
| 2021 | 362 | 97 |
| 2022 | 441 | 101 |
| 2023 | 420 | 92 |

### EU Taxonomy KPIs

In 2024, ASM updated its methodology for assessing expenditure KPIs under the EU Taxonomy. The more refined data inputs have led to reevaluated numerators and denominators for both capex and opex. For more details refer to chapter 20 of this Annual Report.

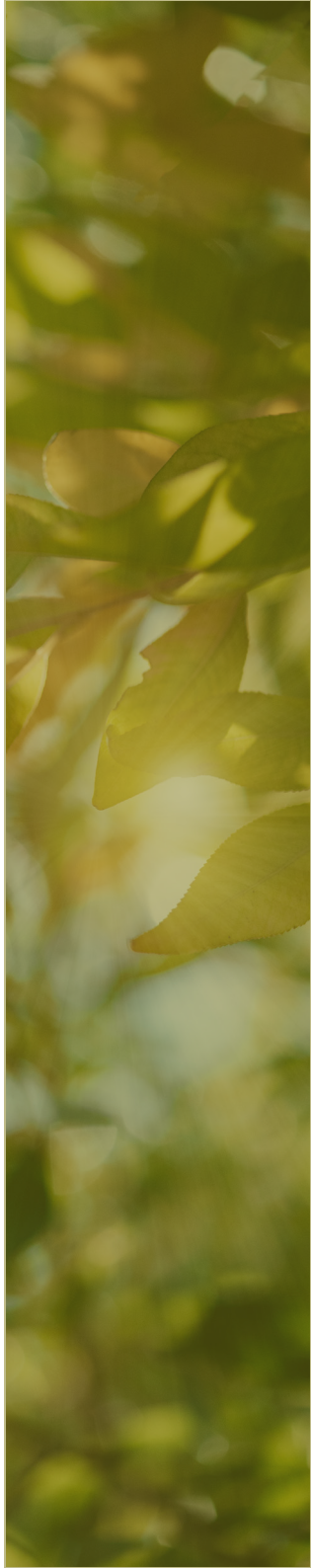
The changes are summarized as follows.

**Restatement proportion of capex, opex (mln. Eur)**

| | Old value | New value |
|---|---|---|
| Capex | 83 / 215 | 314 / 336 |
| Opex | 45 / 47 | 274 / 274 |

If you are interested in sustainability assurance and how it is practiced around the world, we recommend the annual State of Play report from IFAC — the latest edition is from 2025: [The State of Play in Sustainability Assurance | IFAC]

If you want to know more about qualifications, we recommend reviewing the latest sustainability assurance guideline from the International Auditing and Assurance Standards Board (IAASB) — ISSA 5000: [International Standard on Sustainability Assurance 5000, General Requirements for Sustainability Assurance Engagements | IAASB]



# PLANS AND TARGETS

Within the ESRS and climate reporting framework, there is one disclosure requirement for transition plans (E1-1) and one for targets (E1-4). These are, of course, closely connected — hence their combination in this chapter. We also refer back to the previous chapter on restatements and the erasure of comparison data, as it can be difficult to maintain plans and targets from several years back, especially when the underlying data is no longer considered valid. Nevertheless, we see this quite frequently.

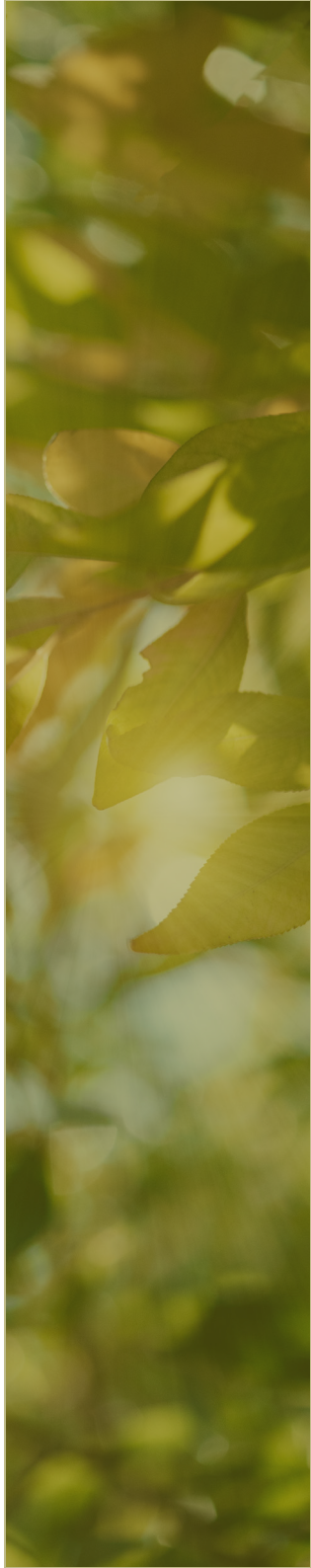
We hereby provide an overview of companies that have restated or erased data and examine their use of the Science Based Targets initiative (SBTi) — including whether they have restated their base data. It illustrates well how different companies have tackled this and calls for better regulation.

| SBTi commitments | Restaters | Erasers | % |
|---|---|---|---|
| Companies with no SBTi | 10 | 14 | 29% |
| Companies that have recalculated their base year, they have reapplied but have not yet received a response from SBTi | 4 | 4 | 10% |
| Companies that have recalculated their base year — sometimes reapplied and approved, but often this is unclear | 16 | 0 | 19% |
| Companies that have not recalculated their base year, and whose SBTi data is likely outdated and thus probably invalid | 18 | 17 | 42% |
| | | | |
| **Total** | **48** | **35** | |

Currently, the rules for changing the base year under the ESRS are quite imprecise. For example, E1-4 Application Requirement 25(b) states that "the baseline value and base year shall not be changed unless significant changes in either the target or reporting boundary occur." However, it is not clear what constitutes a significant change, nor do the rules account for blatant errors or fundamental changes in accounting policies. For more on this, see our recommendations to regulators at the end of this chapter.

Transition plans and targets are among the most important pieces of CSRD-related information for investors and other stakeholders. These elements explain how a company intends to respond to climate change and, where relevant, integrate climate actions into its business model. A transition plan should also include information on how the company plans to reduce its own emissions — assuming this is a stated ambition. Even if the company does not plan to reduce emissions, it is important for investors and stakeholders to be made aware of this.

At present, transition plans are reported very inconsistently — often imprecisely, and in ways that are not comparable across companies. They are rarely quantified and even more rarely monetized. While quantification and monetization have improved compared to previous years, they remain uncommon, which is why we focus on them in this chapter.



For users to meaningfully incorporate this forward-looking information into their analyses, it's essential to understand the levers behind a company's plan: the necessary investments to reach net-zero targets, the cost implications of shifting from one fuel type to another, or the potential gains from being a first mover, etc. This type of information is vital in assessing a company's future value.

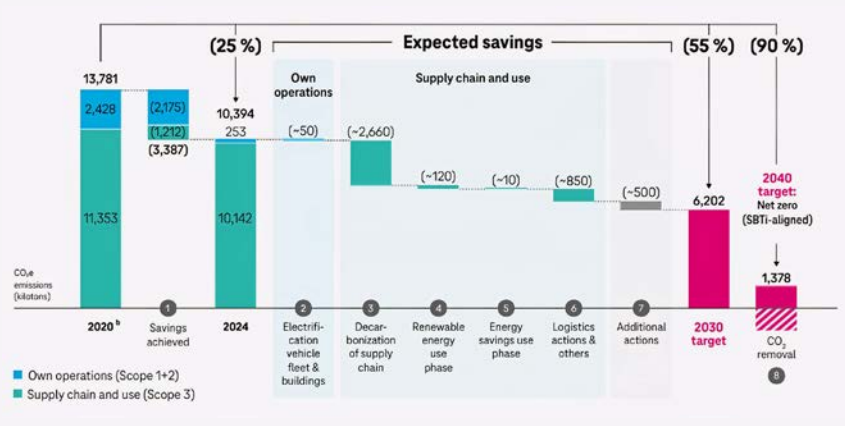
Can investors identify a hidden gem?

Most financial institutions set sector-specific targets for their financed emissions — an example can be seen from Nordea (p. 160). Note that it also includes information on the specific metrics used per sector.

The following table provides basic information around Nordea's sector targets and the progression of these targets.

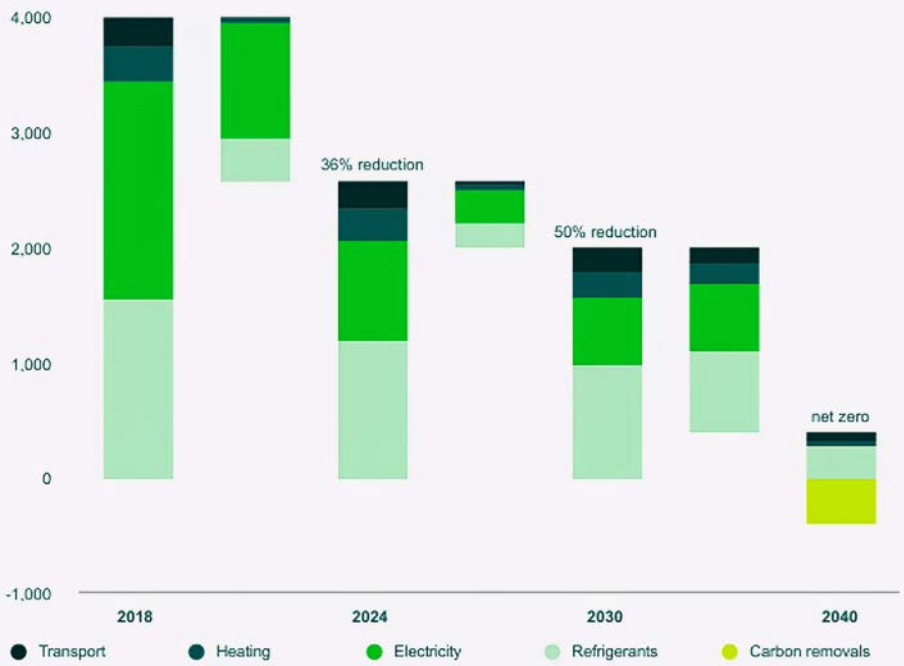
| Sector | Sub-sector | Emissions scope | Metric | Benchmark scenarios | Base year | Baseline[1] | Target year | Target | 2024 Actuals[2] | Baseline vs 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential real estate[3] | Households and tenant-owner associations | 1 and 2 | Emissions intensity $kgCO_2e/m^2$ | CRREM v1.093[6] | 2019 | 17.4 | 2030 | -40-50% | 16.6 | -5% |
| Shipping | Vessels | 1 | Emissions intensity AER, $gCO_2$/dwt-nm | Poseidon Principles (IMO 2050) | 2019 | 8.3 | 2030 | -30% | 7.4 | -10% |
| Agriculture[3] | Animal husbandry; crops, plantation and hunting | 1 and 2 | Emissions intensity $tCO_2e$/EURm[5] | National sector targets and SBTi FLAG | 2021 | 758 | 2030 | -40-50% | 704 | -7% |
| Motor vehicles[3] | Cars and vans | 1[4] | Emissions intensity $gCO_2e/km$ | IEA NZE[7] | 2022 | 113 | 2030 | -40% | 107 | -6% |
| Power production | – | 1 and 2 | Emissions intensity $gCO_2e/kWh$ | IEA NZE[7] SBTi 1.5C | 2021 | 220 | 2030 | -70% | 23 | -90% |
| Oil and gas | Exploration and production | 1, 2 and 3 | Absolute emissions $MtCO_2e$[5] | IEA NZE[7] | 2019 | 2.8 | 2030 | -55% | 0.7 | -74% |
| Offshore | Drilling rigs and offshore service vessels within Oil and gas and Shipping | – | Lending EURm | – | 2019 | 1,872 | 2025 | -100% | 72 | -96% |
| Mining | Thermal peat | – | Lending EURm | IEA NZE[7] | 2022 | 52 | 2025 | -100% | 18 | -64% |
| | Thermal coal | – | Lending EURm | IEA NZE[7] | | Restrictive policy | | | Full phase-out achieved in 2021 | |

The first example from the "real economy" companies is from Deutsche Telekom (p. 127), which presents a classic[5] "waterfall" model. What makes this example noteworthy is its reasonably detailed breakdown of the decarbonization levers and the anticipated impact of each.

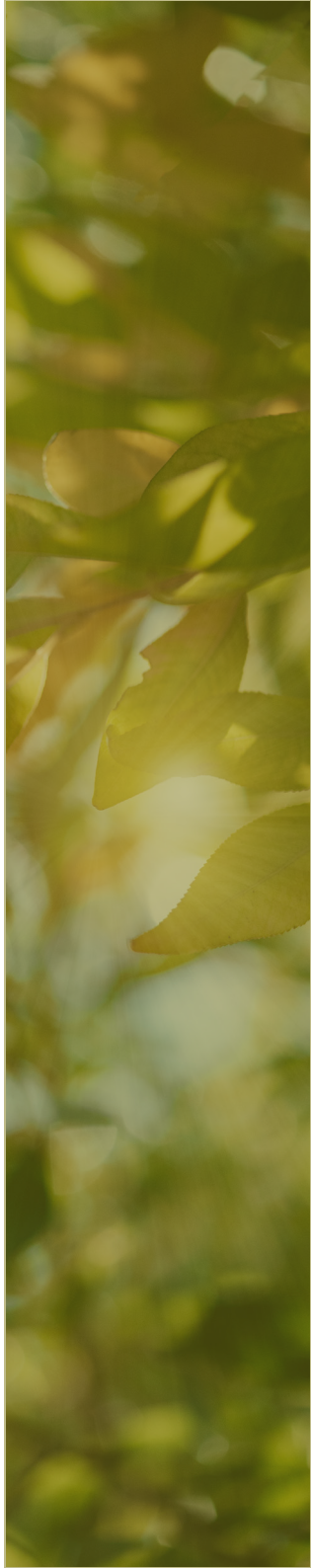


Ahold Delhaize (p. 110) also uses the "waterfall" model but goes a step further by including levers further along the planning horizon, making it possible to see what is expected to contribute, when, and by how much.

**Scope 1 and 2 road to decarbonization: Expected reduction plan for scope 1 and 2 GHG emissions based upon our current best estimate for the period 2024 to 2040**
**(in $MtCO_2e$)**




| in $MtCO_2e$ | Base year (2018) | Achieved reduction (2024) | 2030 | 2040 |
|---|---|---|---|---|
| Total GHG emissions | 4.0 | 2.6 | 2.0 | 0.4 |
| Refrigerant replacement and conversion | | (0.4) | (0.2) | (0.7) |
| Electricity: Reach 100% zero-emissions electricity | | (1.0) | (0.3) | (0.6) |
| Heating switch to fossil fuel-free heating | | — | — | (0.2) |
| Transport switch to fossil fuel-free vehicles | | — | — | (0.1) |

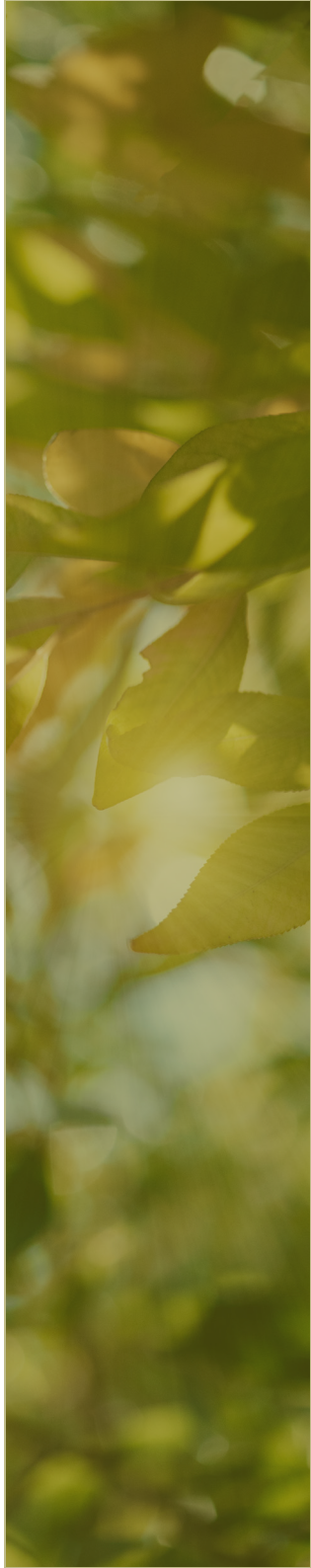


BASF (p. 187) provides a monetized view of their transition plan — note the connection to the EU Taxonomy.

The transition plan is embedded in our financial planning and was approved by the Board of Executive Directors and the Supervisory Board. It is based on investments of around €300 million in Scope 1 measures and €250 million in renewable energies between 2025 and 2028. These are part of BASF's green transformation expenditure of €600 million each year on average.

In 2024, we invested €59 million (taxonomy-aligned capital expenditures/capex) in constructing a water electrolysis plant for producing hydrogen at our Ludwigshafen site in Germany (see the table on capital expenditures/capex in EU Taxonomy on page 263).

Furthermore, we invested €149 million, which are attributable to gas-related economic activity (see the table on capital expenditures/capex in EU Taxonomy on page 263). In addition to investments made to achieve our emission reduction target, we are also investing in steam generation at our Verbund site in Zhanjiang, China, which is under construction. Part of steam production there will come from a natural gas fired boiler, alongside to the future use of process waste heat steam.



Airbus (p. 168) also provides an overview of the future investments needed to achieve its decarbonisation targets. Note also the connection to the Taxonomy reporting.

**Investing in the future**

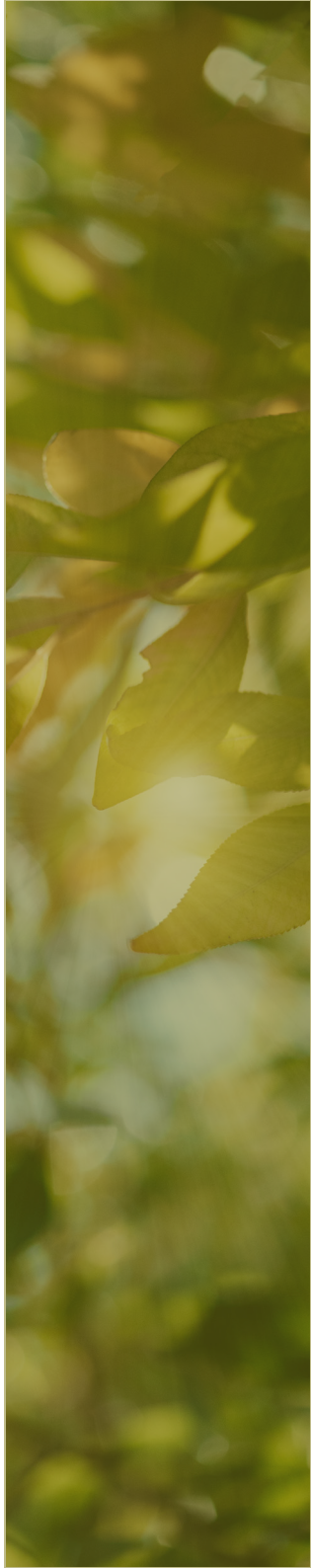
The Company's total Research and Development budget (see table below) is mainly split between - but not limited to - investments in incremental developments of the Company's current product portfolio which is required to maintain its competitiveness, including from a fuel/ $CO_2$ efficiency perspective, as well as investment in the development of breakthrough technologies (e.g. hydrogen based systems, electric machines, energy storage and distribution) that are required for future products.

| Key figures | Unit | 2024 |
|---|---|---|
| Research and development spent | Bn € | **3.250** |
| Total OpEx (R&D) meeting EU Taxonomy technical screening criteria for substantial contribution to climate change mitigation objective (also referred to as "Alignment assessment - conditional use of substances" in section "– 6.2.7.3") | Bn € | **1.440** |
| Of which, reported as aligned (OpEx) in the EU Taxonomy report | Bn € | **0** |
| Total CapEx meeting EU Taxonomy technical screening criteria for substantial contribution to climate change mitigation objective (also referred to as "Alignment assessment - conditional use of substances" in section "– 6.2.7.3") | Bn € | **1.472** |
| Of which, reported as aligned (CapEx) in the EU Taxonomy report | Bn € | **0** |

See "– 6.2.7 EU taxonomy - Disclosures pursuant to Article 8 of Regulation (EU) 2020/852 (Taxonomy Regulation)"

Finally, Endesa (p. 222) has both quantified and monetized its transition plan by lever and identified how each will impact the overall strategy. They are unusually specific in outlining their planned actions.

| Objectives | Levers | Actions | Strategic Impact | Resources per Share (€) |
|---|---|---|---|---|
| **Scope 1 emissions from generation <95g$CO_2$e/kWh in 2030 0g$CO_2$e/kWh in 2040**<br>**Scope 1 emissions from mainland generation 70g$CO_2$e/kWh in 2027**<br>**Scope 1+3 emissions from electricity trading <90g$CO_2$e/kWh in 2030 0g$CO_2$e/kWh in 2040** | **Increase in Renewable Generation Capacity** | • Development of wind and solar plants: Endesa is increasing installed renewable generation capacity, with large-scale projects in Spain and Portugal, to reach a gross renewable capacity volume of 13,100 MW in 2027, which will enable a 32% increase in renewable electricity generation compared to the end of 2024.<br>• Investment in batteries and storage: Implementation of energy storage systems in new renewable installations, improving grid efficiency and stability.<br>• Complementary to the organic development of new renewable capacity, growth under the partnership model is considered to maximise the risk-return profile. | This approach supports the Energy Transition and positions Endesa as a leader in clean generation, driving the electrification of the economy and reducing its dependence on fossil fuels. | 3,700 million of Euros over the 2025-2027 horizon. |
| | **Decarbonisation of the Generation Park** | • Modernisation of the generation plant in isolated systems: Endesa has submitted bids to modernise the thermal generation plant as part of the competitive tendering process. In addition, authorisation has been obtained for the closure of the Gas 1 de Jinamar and Gas Móvil de Las Salinas units.<br>• Achieve *"Net-Zero" by* 2040.<br>• Optimisation of operations: Adoption of advanced technologies and operational improvements to reduce emissions and improve energy efficiency in combined cycle plants. | These actions are key to reducing direct Greenhouse Gases (GHG) emissions, meeting carbon neutrality commitments and responding to regulatory and social pressure to eliminate the most polluting energy sources. | Resources will be allocated following the resolution of the Concurrence Competition. |
| | **Quality, Resilience and Digitisation of the Grid, Grid Management and Connections** | • Investment in networks as a key factor for the Energy Transition, improving energy management and efficiency, reducing technical and non-technical losses, and promoting integration of renewables and the electrification of final energy consumption.<br>• Automation and predictive maintenance: Use of digital and analytical tools for preventive maintenance of infrastructure, reducing the risk of failure and increasing resilience to weather events. | The modernisation and expansion of grid capacity is a necessary step in the Energy Transition. | 4,000 million of Euros over the 2025-2027 horizon. |
| | **Demand Side Electrification and Electric Mobility** | • Development of charging infrastructure for electric vehicles.<br>• Energy efficiency services: Energy efficiency and self-consumption solutions are promoted for industrial and residential sectors, facilitating the transition to more sustainable electricity consumption. | These actions not only support the transition to cleaner mobility and the reduction of emissions in the transport and industrial sectors, but also generate new business opportunities for Endesa in the energy services sector. | 900 million of Euros over the 2025-2027 horizon. |



**Our recommendations to regulators regarding comparative and base year data:**

- Clarify when restatements of comparative and base year data are required.
- To maximize coherence with financial reporting, apply financial reporting logic[6] to restatements of comparison data — though not necessarily to base year data.

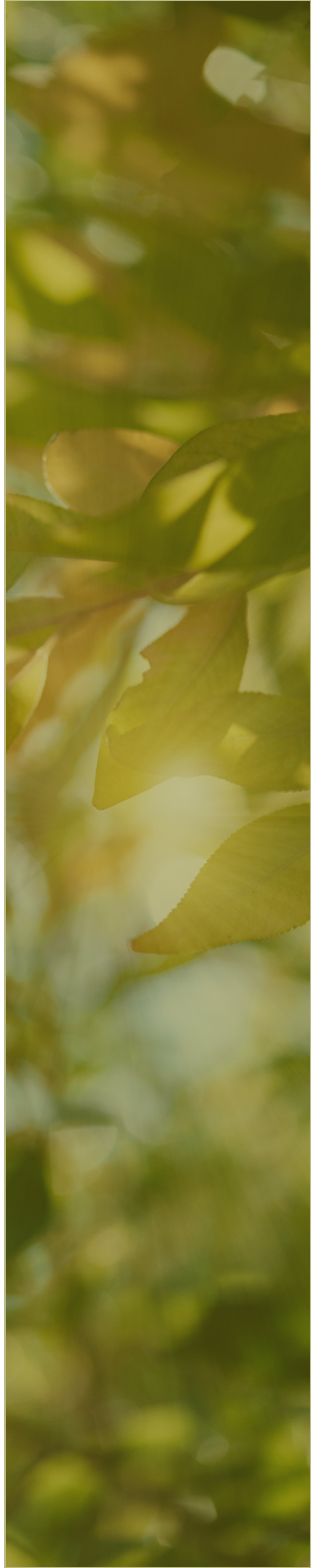
**Suggested Principles:**

- Reorganizations: Do not restate comparison data — this preserves alignment with financial reporting, as reorganizations typically have no impact on financial comparison data, and it ensures KPI consistency (e.g., GHG intensities). The base year may be adjusted (as is common for SBTi targets), but any changes must be fully disclosed.
- Emission factor updates: Do not restate comparison data — this does not constitute a methodological change (similar to adjustments in depreciation periods). Significant changes may affect the base year; disclose any adjustments if deemed necessary.
- Errors and real methodological changes: These impact both comparison and base year data — full disclosure is required.

If you are uncertain about how to develop a Climate Transition Action Plan (CTAP), together with CDP, Ceres, and EDF Business, we published a guideline in 2023 — see more here: WMBC-Climate-Transition-Action-Plans.pdf

As of January 2025, EFRAG has released a draft Implementation Guidance on transition plans Microsoft Word - Transition Plan ESRS Implementation Guidance V1.10 - after TEG – The final version is still pending.

For target-setting, we refer to SBTi: Standards and guidance - Science Based Targets Initiative



# ENERGY

Energy reporting is covered by E1-5: Energy Consumption and Mix. The objective of this Disclosure Requirement is to provide an understanding of the undertaking's total energy consumption in absolute terms (MWh), improvements in energy efficiency, exposure to coal, oil, and gas-related activities, as well as the share of renewable energy in its overall energy mix. Accordingly, the undertaking must disaggregate and disclose its non-renewable energy consumption, nuclear energy consumption, and renewable energy consumption separately, all in MWh.

Most companies have deemed it material to report on energy consumption. The statistics are as follows:

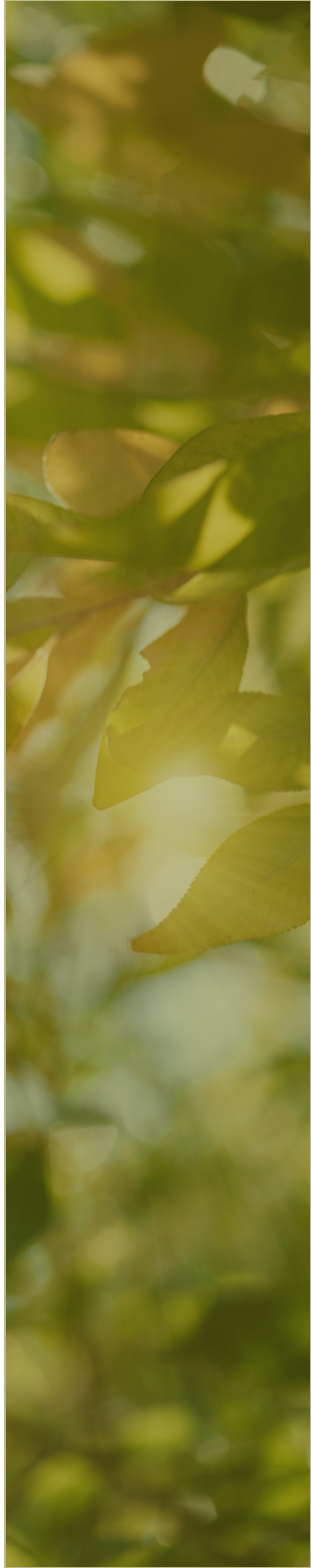
| Energy reporting | Number of companies |
|---|---|
| Report on Energy | 77 |
| Report partially on Energy | 10 |
| Do not report on Energy | 6 |
| | |
| **Total** | **93** |

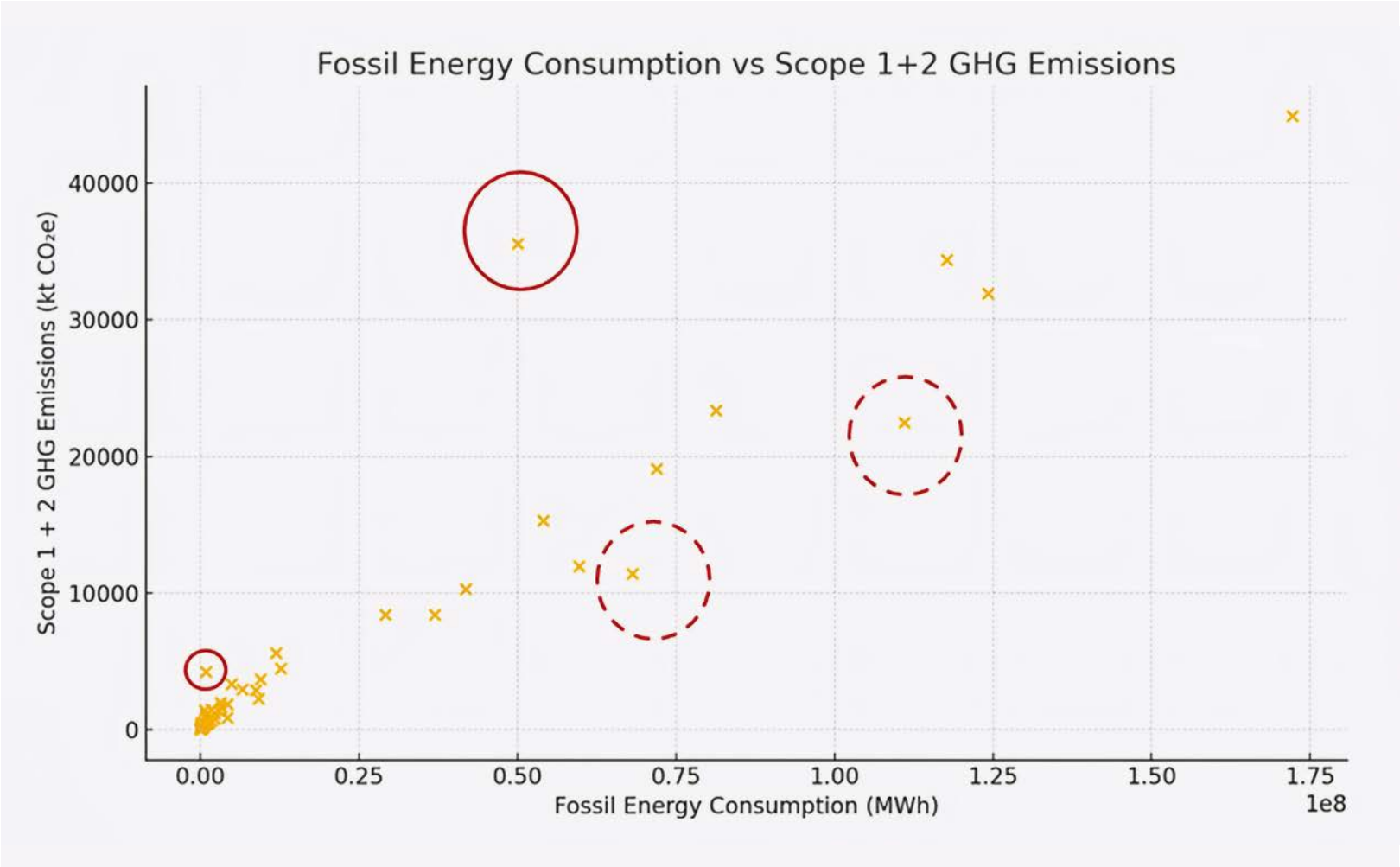
Companies that report only partially on energy are typically categorized as such when their reporting does not fully comply with Application Requirement 34 — for instance, when it fails to segregate nuclear sources. This separation of fossil fuels, nuclear sources, and renewables is important, as some investors wish to assess the risk profile of a company's energy consumption. A high reliance on fossil fuels may increase a company's risk exposure. Other investors and stakeholders may be interested in tracking the share of green energy used.

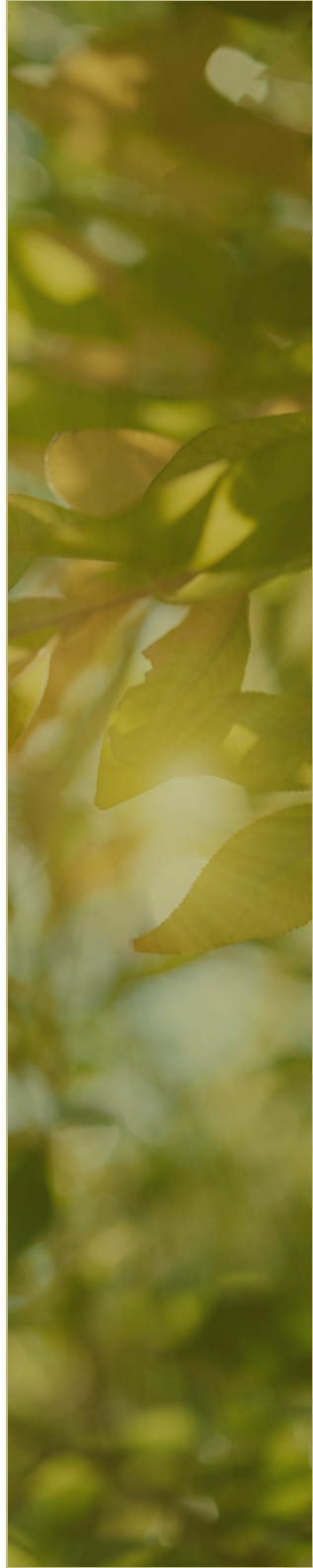
Energy is often not considered material by companies that also do not report on GHG Scope 1 and 2 emissions — typically some financial institutions, which generally only report material Scope 3, Category 15 (financed emissions).

Fossil energy becomes an important KPI if a company also reports GHG Scope 1 and 2 emissions (location-based). These KPIs should, in fact, be correlated, and companies and their auditors should be aware that there is a normal outcome range for the expected relationship between them. The overview on the next page illustrates this relationship and highlights outliers (indicated by red rings — those with dotted rings are only potentially incorrect), where either the energy data, GHG data, or both may be questionable due to calculation errors, unit mismatches, or typos, etc.

In any case, when such datasets outside the normal outcome range are presented within the same report, they warrant a clear and thorough explanation. We have occasionally observed companies where we suspect that only electricity consumption was reported under energy — which would constitute underreporting.




Fossil Energy Consumption vs Scope 1+2 GHG Emissions
Scope 1 + 2 GHG Emissions (kt CO₂e)
40000
30000
20000
10000
0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
1e8
Fossil Energy Consumption (MWh)



The following illustrates a typical Energy note from Stellantis (p. 207) — note how the company also includes its self-generated renewable energy:

*Energy consumption and mix*

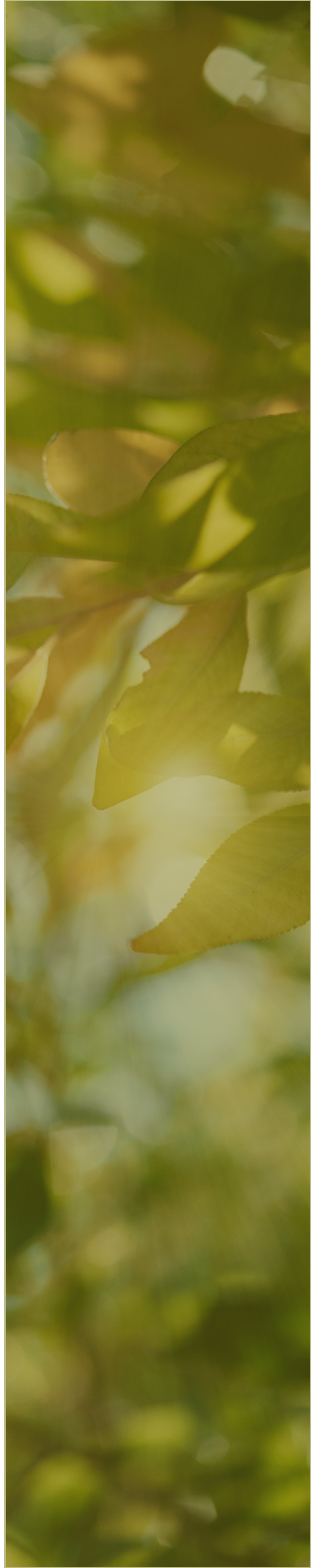
| *(MWh)* | | 2024 |
|---|---|---|
| 1 | Fuel consumption from coal and coal products | 70,138 |
| 2 | Fuel consumption from crude oil and petroleum products | 170,035 |
| 3 | Fuel consumption from natural gas | 5,141,155 |
| 4 | Fuel consumption from other fossil sources | 37,351 |
| 5 | Consumption of purchased or acquired electricity, heat, steam, and cooling from fossil sources | 3,354,013 |
| **6** | **Total fossil energy consumption (calculated as the sum of lines 1 to 5)** | **8,772,692** |
| **7** | **Total energy consumption from nuclear sources** | **1,617,055** |
| 8 | Fuel consumption for renewable sources, including biomass (also comprising industrial and municipal waste of biologic origin, biogas, renewable hydrogen) | 27,935 |
| 9 | Consumption of purchased or acquired electricity, heat, steam, and cooling from renewable sources | 1,852,080 |
| 10 | The consumption of self-generated non-fuel renewable energy | 41,470 |
| **11** | **Total renewable energy consumption (calculated as the sum of lines 8 to 10)** | **1,921,485** |
| | **Total energy consumption (calculated as the sum of lines 6, 7 and 11)** | **12,311,232** |

*Renewable and non-renewable energy production*

| *(MWh)* | 2024 |
|---|---|
| Non-renewable energy | 220,303 |
| Renewable energy | 69,405 |
| **Total renewable and non-renewable energy production** | **289,708** |

*Energy intensity*

| | 2024 |
|---|---|
| Total Net revenues (€M) | €156,878 |
| **Energy intensity (total energy consumption per Net revenues) associated with activities in high climate impact[(1)]** | **78.5 MWh/€M** |



Some sectors also develop standard metrics that are particularly relevant to their operations. See this example from Capgemini (p. 216), which reports on the Power Usage Effectiveness of their data centres.

**Power Usage Effectiveness**

| Metrics | Unit | 2019 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|
| Data centers (Leased and owned) – Power Usage Effectiveness | # | 1.7527 | 1.6198 | 1.6057 | 1.5853 | 1.5515 |

1) Data Center Power Usage Effectiveness (PUE) is a standard industry measure of how energy efficient a data center is. It compares the amount of non-computing overhead energy (used for things like cooling and power distribution) to the amount of energy used to power IT equipment. To help us track the energy efficiency of the data centers we use, we calculate a weighted average of the PUE of leased and owned data centers (with the weighting based on the total energy consumption of each data center).

CaixaBank (p. 308) reports on its various energy efficiency agreements and certificates — including coverage of its Data Processing Centres, which are naturally significant energy consumers for the company as well.

**1. Promotion of energy efficiency.**

The promotion of energy efficiency is the seventh line of action in the Environmental Management Plan. In this regard, CaixaBank has promoted the implementation of various initiatives to improve the energy efficiency of its buildings, with the aim of contributing to the reduction of Scope 2 emissions in the Carbon Footprint, including the following:

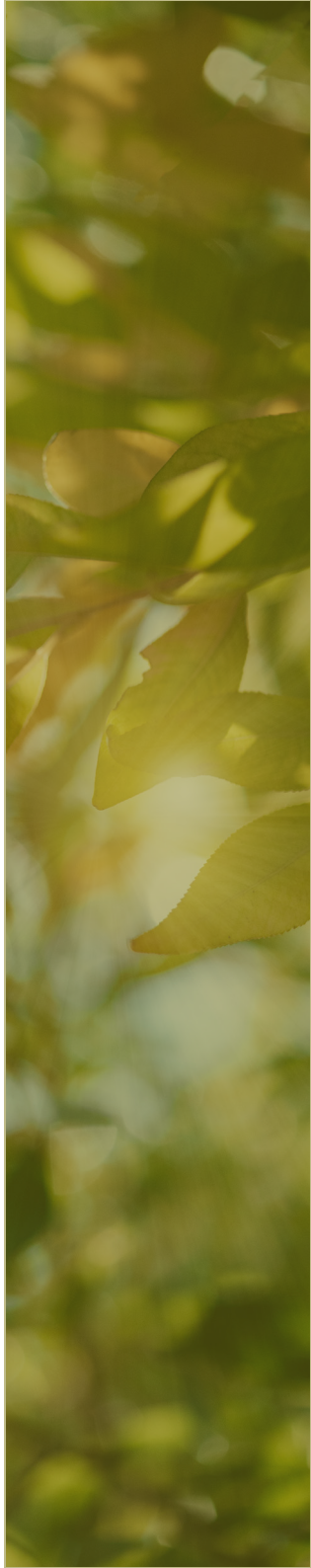
> In recent years, several initiatives have been implemented by CaixaBank to reduce consumption in the branch network, based on the savings potential: replacement of fluorescent lighting with LED lighting, replacement of air conditioning equipment with more efficient units, motion sensors and light turn-off systems, single-pole switches linked to time regulation, replacement of computer equipment, etc.

> The two Data Processing Centres (DPCs) have LEED certification, with the silver and gold category, respectively.

> CaixaBank's strategy regarding electricity consumption focuses on the use of renewable energy. For years, 100% of the electricity consumed has been from certified renewable sources. To achieve this, the strategy involves reaching electricity purchase agreements through two types of contractual instruments:

  > PPAs (Power Purchase Agreements) with an associated annual purchase of 113.88 GWh/year, which represents 52% of the total electricity purchase; and

  > GdO (Guarantee of Origin Certificates) with an associated annual purchase of 218.05 GWh/year, which represents 100% of the total electricity purchase.

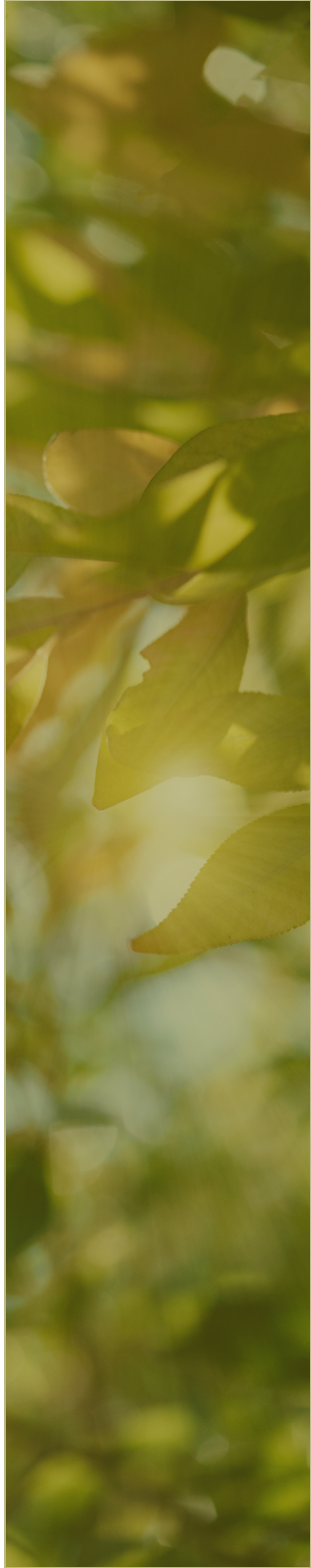


Some companies have entered into Power Purchase Agreements (PPAs) - a detail that is particularly useful for investors assessing the risk profile of companies highly dependent on energy prices and consumption. See this example from Heineken (p. 181):

## Renewable electricity contractual instruments

The market-based method quantifies Scope 2 emissions based on contractual instruments to reflect emissions associated with purchased energy. The share of HEINEKEN's contractual agreements in 2024 is disclosed in the table below.

| Contract type (%) | 2024 |
|---|---|
| Physical power purchase agreement (PPA) | 42% |
| Virtual power purchase agreement (vPPA) | 8% |
| Energy attribute certificates (EACs) | 21% |
| Other (e.g. retail contracts, specific projects) | 29% |
| **Total** | **100%** |



See also this detailed note from Saint-Gobain (p. 389), which also explains the connection to IFRS reporting, the geographic allocation of the PPAs, and the duration of these agreements. This is a particularly interesting note for investors, as they can evaluate the energy risk profile for the company.

The most material agreements (>200 GWh over the term of the contract) at December 31, 2024 are presented in the table below along with their main characteristics:

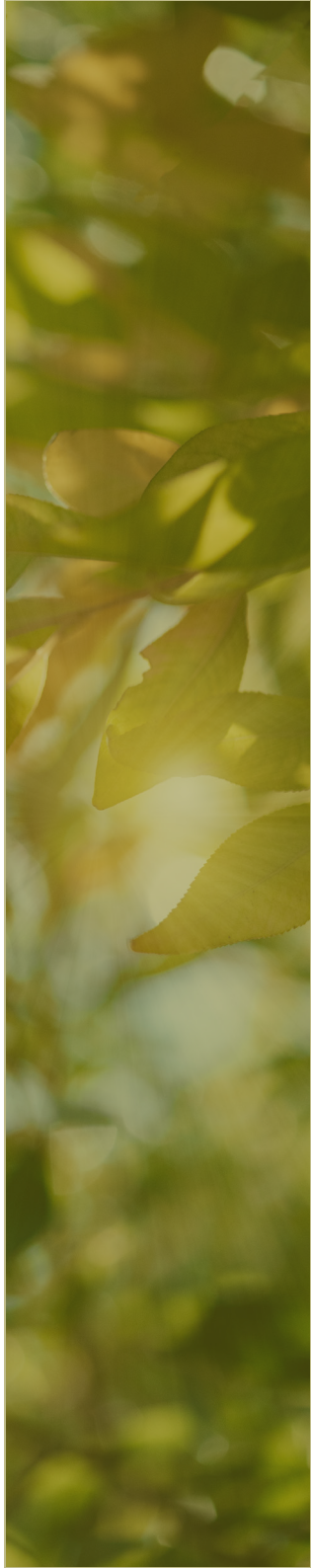
| Type of contract | Location | Type of energy | Power (per year) | % of the country's electricity consumption (2024 baseline) | Start date | Contract duration | Accounting treatment |
|---|---|---|---|---|---|---|---|
| VPPA | USA (Blooming Grove) | Wind | 460 GWh | > 25% | 2020 | 12 years | IFRS 9 (derivatives) |
| VPPA | USA (Cotton Bayou) | Solar | 452 GWh | > 25% | 2024 | 10 years | IFRS 9 (derivatives) |
| VPPA | USA (Danish fields) | Solar | 224 GWh | > 10% | 2024 | 15 years | IFRS 9 (derivatives) |
| VPPA | Poland | Wind | 180 GWh | > 25% | 2025 | 15 years | IFRS 9 (derivatives) |
| PPA | Romania | Mix | 160 GWh | > 75% | 2026 | 5 years | Purchase contract |
| PPA | France | Wind | 175 GWh | > 10% | 2026 | 5 years | Purchase contract |
| PPA | Spain | Mix | 150 GWh | > 25% | 2024 | 10 years | Purchase contract |
| PPA | France | Mix | 108 GWh | > 10% | 2026 | 20 years | Purchase contract |
| PPA | USA (Chowchilla) | Solar | 78 GWh | < 10% | 2023 | 15 years | IFRS 16 |
| PPA | France | Solar | 36 GWh | < 10% | 2024 | 15 years | Purchase contract |
| PPA | Italy | Wind | 22 GWh | > 10% | 2024 | 12 years | Purchase contract |
| PPA | Spain | Solar | 18.5 GWh | < 10% | 2023 | 12 years | Purchase contract |
| PPA | Romania | Solar | 12 GWh | < 10% | 2023 | 20 years | Purchase contract |

We launched the Fossil to Clean campaign in 2023 to catalyse and guide a movement from fossil fuels to clean energy solutions. As part of this effort—together with the Energy Transitions Commission and the Science Based Targets initiative— we developed a set of principles to guide corporate action related to fossil fuel phase-out.

You can explore these resources here:

- Fossil to Clean Campaign Overview
- Fossil to Clean Reporting Principles

These principles may help companies structure their energy transition more effectively. Alignment with such principles may also help support investors and other stakeholders assess the strength of their plans and targets.



# GHG EMISSIONS

GHG emission reporting is covered by ESRS E1-6: Gross Scopes 1, 2, 3 and Total GHG Emissions. The objective is to provide information on a company's direct and indirect greenhouse gas emissions across all three scopes, both in absolute terms and as a relative KPI against revenue. As such, E1-6 serves as a foundational input for developing transition plans, setting targets, performing energy calculations, and more. In other words, it is the cornerstone of climate reporting — and as such, its validity and completeness are essential.

For investors and other stakeholders, GHG reporting is crucial when evaluating a company's risk profile — for example, identifying which companies have already transitioned or will need to transition their machinery to alternative energy sources, requiring capital expenditures, or which companies emit less and are therefore less exposed to potential $CO_2$ taxes.

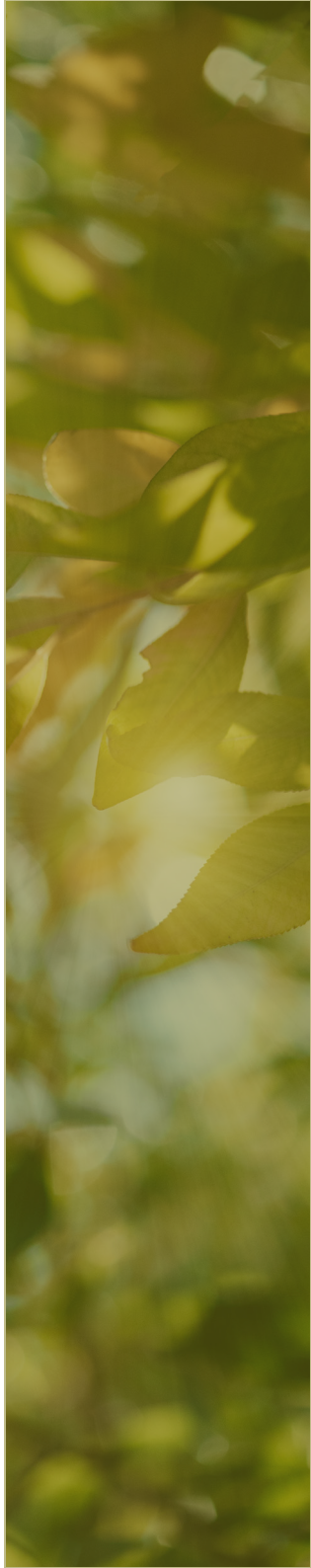
This data enables many valuable types of analysis.

Given the central importance of GHG reporting to both companies and stakeholders, it is encouraging to see the widespread restatement or removal of outdated comparison data. This suggests that regulation and assurance are already improving data quality — in contrast to the more flexible, and sometimes inconsistent, voluntary reporting of the past.

From the restatements we observe an increase in Scope 1 and 2, which primarily is explained — when explanations are provided — by changes in boundaries (often meaning that all subsidiaries are now included), as well as improvements in data collection, calculation, and/or documentation methods. This is a very positive development. See this example from Inditex (p. 344):

**Emissions calculation**

| Description | Metric | Scope | Methodology | Information source | Emission factor | Change of criterion/ methodology |
|---|---|---|---|---|---|---|
| Scope 1 emissions (direct emissions related to sources under the direct control of the Inditex Group) | E1-4_01, E1-4_03, E1-4_04, E1-4_18, E1-4_21, E1-4_25, E1-6_01, E1-6_03, E1-6_04, E1-6_07, E1-6_08, E1-6_15 | Own operations: All headquarters, own factories, own logistics centres, e-commerce centres (operational control) and own stores are included. | Scope 1 emissions are calculated based on total fuel consumption. Total consumption is multiplied by the corresponding emission factor, depending on the type of fuel. For facilities located in Spain, the emission factors of MITECO (Ministerio para la Transición Ecológica y el Reto Demográfico) are used, and for the rest, those of DEFRA (Department for Environment, Food & Rural Affairs) are used. | Primary data: 96%<br><br>Estimated data: 4% | DEFRA (Department for Environment Food & Rural Affairs), 2024.<br><br>MITECO (Ministerio para la Transición Ecológica y el Reto Demográfico), 2023. | The scope has been extended to include e-commerce distribution centres where operational control is held. Fuel consumption and fugitive emissions from own stores have been included. The figures from previous years have been recalculated to ensure the transparency and comparability of the data. |
| Scope 2 emissions (market-based) (Indirect emissions, associated with the generation of electricity, heating, steam and cooling acquired and consumed by the Inditex Group) | E1-4_01, E1-4_03, E1-4_04, E1-4_18, E1-4_21, E1-4_25, E1-6_01, E1-6_03, E1-6_04, E1-6_10, E1-6_13, E1-6_15, E1-6_18, E1-6_21, E1-6_22, E1-6_31 | Own operations: All headquarters, own factories, own logistics centres, e-commerce centres (operational control) and own stores are included. | Emissions associated with purchased electricity are calculated by multiplying electricity consumption by the corresponding emission factor, depending on the source of the energy and/or the market where the facility is located. For renewable energy, the emission factor of the corresponding contractual instrument is used (PPA, I-REC, GO, etc.). Otherwise, International Energy Agency (IEA) emission factors are used.<br><br>For heating, steam and cooling acquired, the total consumption is multiplied by the corresponding emission factor. In this case, DEFRA (Department for Environment, Food & Rural Affairs) emission factors are used. | Primary data: 68%<br><br>Estimated data: 32% | Market-based method:<br>/ Contractual instruments for renewable energy (PPA, EACs, etc.).<br><br>/ DEFRA (Department for Environment Food & Rural Affairs), 2024. | The scope has been extended to include e-commerce distribution centres where operational control is held. This includes the purchase of heating, cooling and steam. The figures from previous years have been recalculated to ensure the transparency and comparability of the data. |



We can observe a slight reduction in Scope 3 upstream emissions. Based on the explanations provided, this is often the net result of two factors: broader data inclusion, which increases reported emissions, and improved calculation methods, which often reduce them. Many companies have moved away from the basic "spend-based" method[7] and instead receive more direct emissions data from their suppliers. This shift often leads to lower reported upstream emissions, as the previously used imprecise cost-based averages are replaced with more accurate emissions data tied to the specific goods or services purchased. See, for example, this explanation from Novo Nordisk (p. 57):

> The review indicated that categories 1 and 2 were previously overstated due to the inherent uncertainty of spend-based emission factors. We have therefore restated scope 3 GHG emissions for 2023. Our efforts to enhance the accuracy of our scope 3 inventory will continue with a further focus on the less material categories. The inherent uncertainties in scope 3 calculation methodologies, together with ongoing scientific advancements, mean that the risk of future restatements will continue to be present for this metric. In 2024, approximately 12% of scope 3 emissions were calculated using primary data.

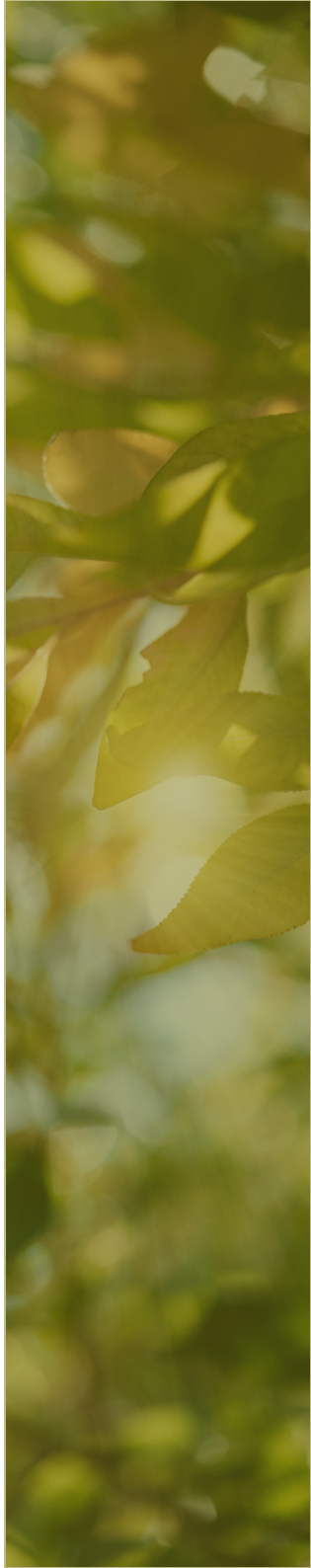
In contrast, we are also seeing a significant increase in Scope 3 downstream emissions. Previously, downstream emissions were often more or less overlooked — likely because the focus was heavily placed on upstream supplier data. Additionally, "spend-based" calculations for upstream emissions are relatively easy to perform and supported by many available tools, while downstream calculations are more complex and often not covered by such tools.

Although downstream reporting has improved significantly, especially for the financial institutions, it is still frequently underreported — at least, when applying basic logical reasoning. For instance, we still see companies that manufacture physical products reporting no or very limited downstream emissions. Unless the products they produce are never used (which we sincerely hope is not the case) and never disposed of, such reporting is highly unlikely — and would, under normal circumstances, require a strong explanation.

We also continue to see companies that, according to their financial reports, hold significant equity-consolidated entities, yet report no or very limited Scope 3, Category 15 (Investments) emissions. This too appears highly unlikely. These inconsistencies, and others, highlight the need for basic logic checks — both by companies and their auditors. So, while downstream reporting has clearly improved and is more complete than in the past, we still expect to see many restatements again in 2025 reports.

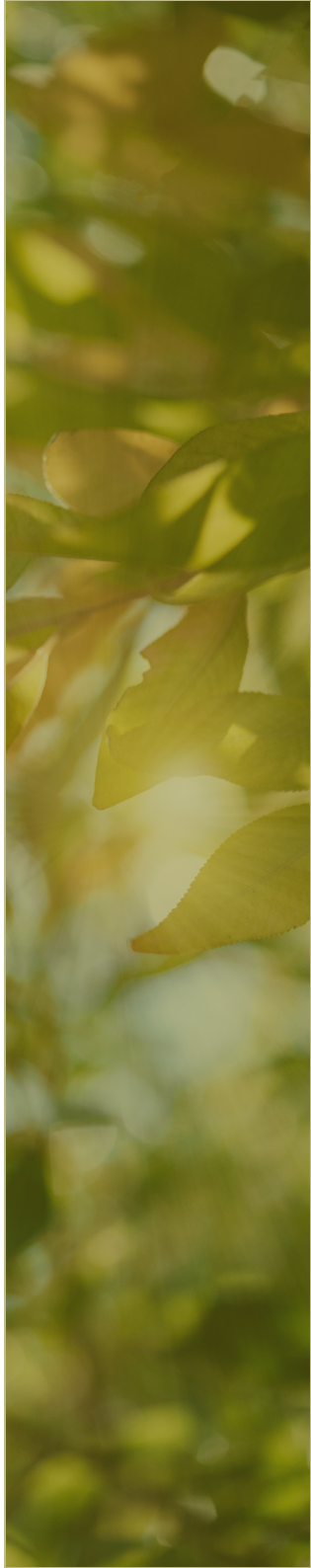
In the following, we will focus on companies' explanations regarding their accounting policies for GHG reporting — not the data tables as required under E1-6 Application Requirement 48, as those are generally handled reasonably well.

However, in this context of the table-use, we would like to note one thing: Financial institutions sometimes "forget" to include the total of their financed emissions (Category 15) in the mandatory table. Instead, they often place the more complex calculations and related notes[8] elsewhere in the report. This practice is unfortunate for users, as it requires them to search through multiple sections of the report to obtain a complete picture of the GHG. It also increases the likelihood that ESG data providers (e.g., MSCI, Sustainalytics, Refinitiv, etc.), will miss or only partially capture the relevant information. As such, this approach is not particularly user-friendly.



The first example is from Air Liquide (p. 320), which provides a detailed and user-friendly overview of the emission factors they use:

| Emission scope/Category | GWP and source of emission factor |
|---|---|
| **Scope 1** | |
| GHG emissions excluding $CO_2$ | IPCC AR6 GWP-100 |
| Transportation | ISO 14083 Tank-to-Wheels values by fuel type |
| **Scope 2** | |
| Electricity | IEA Grid Emission Factor<br>Residual Emission Factors of the AIB (Association of Issuing Bodies) in Europe<br>Residual Emission Factors for Green-E in the US<br>Government of Canada residual emission factors |
| Electricity and Steam | Specific Emission Factors of energy suppliers |
| Steam | Emission Factor developed using IEA production mix and ADEME emission factors |
| Biogenic emissions (not included in Scope 2) | Emission Factor developed using the IEA's World Energy Statistics and the RTE France fossil combustion emission factor |
| **Scope 3** | |
| Categories 1 and 2 | CEDA (Comprehensive Environmental Data Archive) factors of Watershed |
| Categories 1, 2, 4a (Upstream transportation) & 6 | ADEME Footprint Base factors |
| Category 3 – Activity A & B | IEA Upstream Life Cycle Emission Factors for Fuels/Power Generation Technologies |
| Category 3 – Activity C | Transmission and distribution losses of the World Bank |
| Category 4b (Upstream distribution) | ISO 14083 Tank-to-Wheels values by fuel type |
| Category 7 | GHG emissions from diesel vehicles of ADEME |
| Category 11 Use of products without $CO_2$ | IPCC AR6 GWP-100 |
| Category 13 Units of production with electricity supplied by the customer | IEA Grid Emission Factor |
| Biogenic emissions of biomethane (not included in Scope 3) | ADEME Footprint Base factors |



The next example is from ASML (p. 226), where they explain how they calculate their downstream emissions related to the use of their products and the end-of-life treatment of sold products.

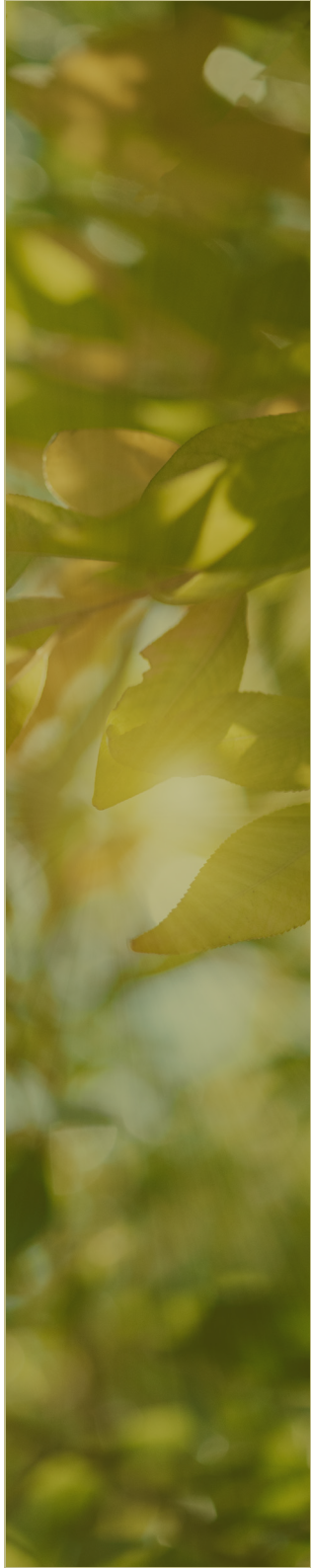
## Energy efficiency and climate action: Additional disclosures (continued)

| Category | Rationale | Methodology description | Reporting boundaries |
|---|---|---|---|
| **Category 9 – Downstream transportation and distribution** | Category 4 (upstream) already includes all inbound and outbound logistic emissions. | N/A | N/A |
| **Category 10 – Processing of sold products** | Our products do not require intermediate processing. | N/A | N/A |
| **Category 11 – Use of sold products** | Material to ASML. Our products consume large amounts of energy to operate. | We estimate the direct use-phase emissions by measuring the energy use of our products and calculating the GHGs emitted during use. We apply a lifetime of 20 years for each system.<br><br>We estimate the annual energy consumption of each product based on the common production and idle time percentages, obtained by customer survey data and verified and evaluated every two years by our development and engineering department. The figure obtained is then multiplied by a lifetime of 20 years. Lastly, we differentiate the products sold to our top five customers (based on 2022 revenue). For those we multiply the energy consumption by the customer emission factor (obtained from CDP) to obtain the total emissions. This emission factor is general per customer and does not differentiate between countries. For the products sold to other customers, we apply country-based emission factors from the IEA (2024) database to convert energy consumption into emissions.<br><br>Some of our products also consume $CO_2$ during their use; this amount consumed is calculated over the lifetime of 20 years and added to obtain the total emissions. | The direct use-phase emissions of sold products over their expected lifetime at our customers' sites. |
| **Category 12 – End-of-life treatment of sold products** | Material to ASML. End-of-life products would require treatment after they are no longer in service. | We apply the waste-type-specific method, on the basis of a high-level estimation of the material composition of our products. We differentiate between metal and non-metal components and estimate the mass fraction for each system on a family level (for example NXE, NXT and XT). We apply emission factors for specific waste types and waste treatment methods.<br><br>The Ecoinvent v.3.11 (cutoff) database is used. | Emissions that occur during the end-of-life treatment of sold products. |
| **Category 13 – Downstream leased assets** | Assets are not leased to other entities. | N/A | N/A |
| **Category 14 – Franchises** | ASML does not operate franchises. | N/A | N/A |
| **Category 15 – Investments** | ASML does not have investments as referred to in the GHG Protocol. All emissions from subsidiaries are included in ASML's GHG emissions. | N/A | N/A |

See also this example from ASM (p. 195), where they explain the limitations of the methods and assumptions used in calculating the various emission sources.

**Scope 3 emissions -** All metrics presented in this section align with the disclosures outlined in Chapter 16.2 of the Annual Report.

| Metric name | Unit of measure | Definition | Methodology | Assumptions and limitations |
|---|---|---|---|---|
| Scope 3 emissions | kilotonnes $CO_2$ equivalent ($CO_2e$) | Scope 3 emissions encompass all peripheral activities that occur in the value chain, excluding those already included in Scope 2. | As part of comprehensive GHG accounting and calculation practices, ASM follows the GHG Protocol, where GHG Scope 3 emissions are calculated by converting the relevant activity data (e.g, spend, distance) to tonnes $CO_2e$ using emission factors. | While Scope 3 encompasses 15 categories, ASM has determined that categories 10, 13, and 14 are not applicable to our business according to the GHG Protocol. |
| Scope 3.1 Purchased goods and services | kilotonnes $CO_2$ equivalent ($CO_2e$) | Emissions from the extraction, production, and transportation of purchased goods and services. | ASM uses a spend-based methodology, aligning company financial tracking system commodity codes with the EPA's GHG emission factor (NAICS) and recommended GHG databases, excluding categories covered by other Scope 3 reporting. Inflation adjustments ensure ongoing calculation accuracy. | The spend-based approach may not fully capture the impact of supplier-specific greenhouse gas (GHG)-reduction initiatives, methodologies and parameters are reviewed annually to incorporate the latest insights. |
| Scope 3.2 Capital goods | kilotonnes $CO_2$ equivalent ($CO_2e$) | Emissions from the extraction, production, and transportation of capital goods purchased by the company. | The spend-based method estimates emissions by multiplying the financial expenditure on capital goods (e.g., machinery, equipment, buildings) by relevant emission factors. | Average emission factors may not capture the variability in emissions across different production processes for specific capital goods. |
| Scope 3.3 Fuel & energy related | kilotonnes $CO_2$ equivalent ($CO2e$) | Emissions related to the extraction, production, and transportation of fuels and energy purchased and consumed by the reporting company (not already included in Scope 1 or Scope 2). | The fuel- and energy-based method estimates emissions by multiplying the quantity of fuel and energy consumed by the respective emission factors). | Emission estimates are based on average factors and may not capture variations in actual operating conditions. |
| Scope 3.4 Upstream transportation & distribution | kilotonnes $CO_2$ equivalent ($CO_2e$) | Emissions from the transportation and distribution of purchased goods (inbound logistics) in vehicles and facilities not owned or controlled by the reporting company. | Emissions are calculated based on detailed emission report of logistics partners. For suppliers where a carbon footprint report including GHG protocol standards is not yet available, ASM calculates the emissions based on distance, shipping weight, and method. | Average transportation emission factors may not fully account for shipment-specific conditions such as vessel type, cargo weight and density, and weather conditions. |
| Scope 3.5 Waste | kilotonnes $CO_2$ equivalent ($CO_2e$) | Emissions from the disposal and treatment of waste generated in the reporting company's operations. | The waste-type specific method estimates emissions by categorizing waste generated into different types (e.g., paper, plastic, electronic, organic) and applying specific emission factors to each waste type based on its treatment method (e.g., landfill, incineration, recycling). | The waste-type specific method may not fully account for complexities in waste management, including waste-stream mixing, evolving treatment technologies, and potential for unintended emissions. |
| Scope 3.6 Business travel | kilotonnes $CO_2$ equivalent ($CO_2e$) | Emissions from the transportation of employees for business-related activities in vehicles not owned or operated by the reporting company.1 | The fuel-based method calculates emissions based on the amount of fuel consumed (e.g., gasoline, jet fuel) for business travel. The distance-based method calculates emissions based on the distance traveled and the mode of transport (e.g., car, plane, train). | Variability in vehicle type, driving conditions, and maintenance can lead to actual emissions that differ from those estimated using average fuel-specific factors. |
| Scope 3.7 | kilotonnes $CO_2$ | Emissions from the transportation of employees between their homes | The distance-based method calculates emissions based on the distance traveled by | Distance-based commuting emissions may not accurately reflect actual |



Some companies have recognized that not all GHG sources offer the same level of data quality. As a result, some provide an overview of the data quality used, allowing report users to assess the reliability and usability of the information. A simple but effective approach is to indicate how much of the data is based on primary versus secondary sources. See this example from Deutsche Post (p. 77)

**GHG EMISSIONS CALCULATION METHODS**

| % | 2024 |
|---|---|
| Scopes 1 and 2 | |
| Primary data | 97.4 |
| Secondary data (modeled data) | 2.6 |
| Scope 3 | |
| Primary data | 20.2 |
| Secondary data | 79.8 |
| Modeled data | 61.0 |
| Default data | 18.8 |

See also this example from Sanofi (pp. 134–135), where they distinguish between the quality of input data and the quality of the models and emission factors used for each Scope 3 source.

### Scope 3 estimated level of accuracy

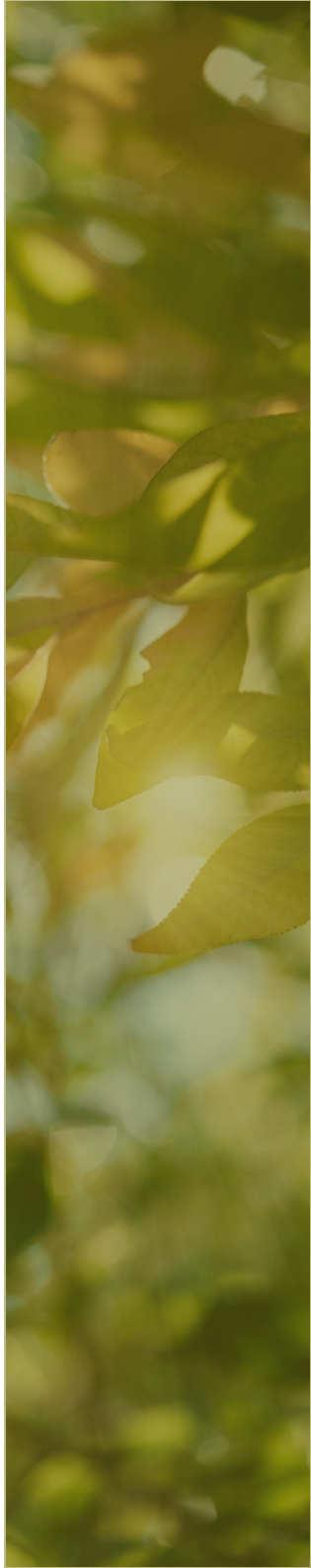
The maturity grade calculation is based on 8 criteria ranked from 1 to 5, which evaluate the quality of the data and the modelling (emissions factor quality):

The quality of the data is assessed on the following criteria:

- integrality of the scope;
- frequency of data capture;
- quality of data sources; and
- completeness of data.

The quality of the modelling is assessed on the following criteria:

- method used;
- emissions factor scope;
- assumptions; and
- reliability of emissions factor source.

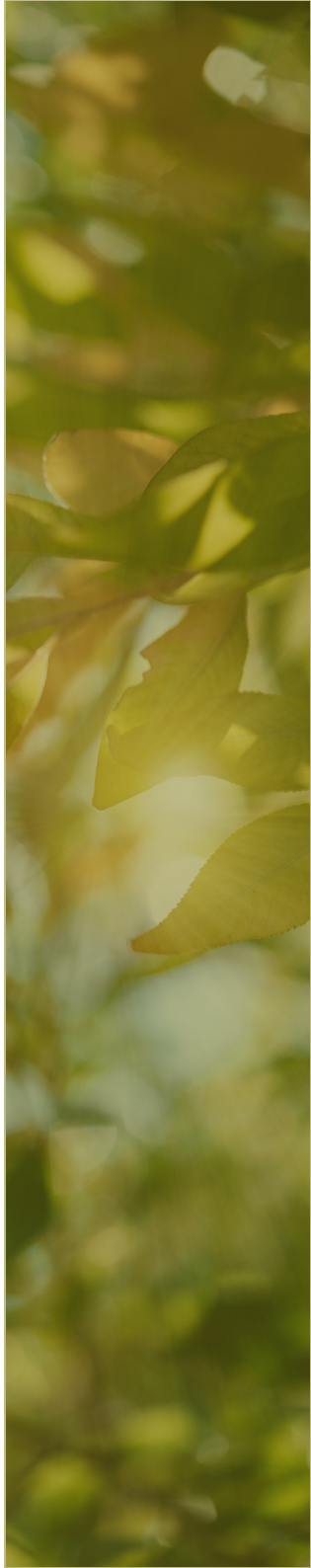


| Scope 3 by category | Quality of the data | Quality of emission factors and modeling |
|---|---|---|
| 1. Purchased goods and services | 3.9 | 4.0 |
| 2. Capital goods | 3.8 | 2.6 |
| 3. Upstream fuel & energy | 4.8 | 3.8 |
| 4. Upstream transport | 3.9 | 3,5 |
| 5. Waste | 4.8 | 3,5 |
| 6. Business travel | 4.1 | 3.8 |
| 7. Employee commuting | 3.3 | 3.1 |
| 9. Downstream transportation | 3.8 | 3.0 |
| 10. Processing of sold products | 4.1 | 3.5 |
| 11. Use of sold products | 4.1 | 3.5 |
| 12. End-of-life | 2.8 | 2.3 |
| 15. Investments | 3 | 3.5 |

Santander (p. 62) has significant financed emissions (Category 15). To ensure that their customers reduce their emissions in alignment with Santander's transition plan, the bank scrutinizes them and also assesses the quality of each customer's transition plan.


A. Based on 2024 year-end drawn exposure, according to portfolio alignment methodology, and including project finance, both in operation and under construction.

| Tier Categories | | Description |
|---|---|---|
| Tier 1 | Leader | • Emissions profile fully aligned with Santander's pathway<br>• Strong transition plan |
| Tier 2 | Strong | • Emissions profile fully aligned with Santander's pathway but improvement needed in transition plan; or<br>• Strong transition plan but emissions profile partially aligned with Santander's pathway |
| Tier 3 | Moderate | • Emissions profile partially aligned with Santander's pathway, but improvement needed in transition plan; or<br>• Emissions profile not aligned with Santander's pathway, but strong transition plan |
| Tier 4 | Weak | • Emissions profile not aligned with Santander's pathway<br>• Weak transition plan |



Finally, some companies also report on their use of supplier cascade principles. See this example from Wolters Kluwer (p. 112), where they explain how they assess their suppliers to ensure they are also working to reduce emissions.

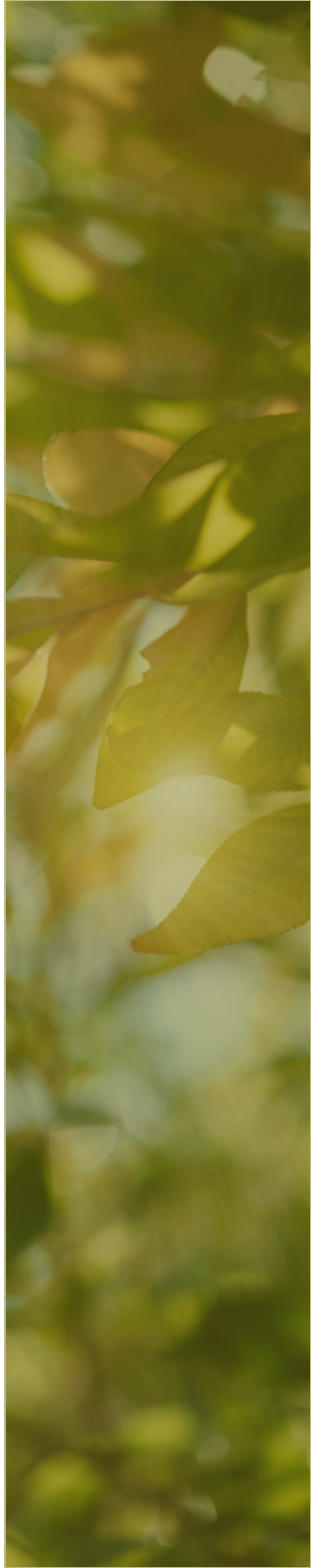
Second, we generated an inventory of our largest suppliers by spend and their respective scope 1, scope 2, and upstream scope 3 GHG emissions, as disclosed in their annual or sustainability reports. These suppliers were analyzed based on their GHG emission reduction targets, including whether they had set near- or long-term science-based targets, and whether these have been validated by the Science-Based Targets initiative (SBTi). The CDP (formerly known as the Carbon Disclosure Project) scores of the suppliers were also included in this analysis, resulting in a comprehensive overview of our strategic suppliers' maturity levels regarding GHG reporting and decarbonization. Another aspect of this work involved analyzing the categories of suppliers in order to determine the highest-emitting industries to focus our efforts on.

Based on this inventory, we have devised a plan for assessing performance of suppliers on their GHG emissions reporting practices and decarbonization initiatives through the development of a carbon scorecard. Going forward, we will use this scorecard as the basis for integrating supplier sustainability assessments into the overall supplier performance review process.

If you want to enhance your GHG reporting, we recommend reviewing the guideline developed by us in collaboration with IFAC, in partnership with GAA and WBCSD. The guideline is designed to help CFOs, accountants, and finance professionals build on existing systems and processes to undertake or improve cost-effective, investor-grade GHG reporting. See more here: Enhancing Greenhouse Gas (GHG) Reporting | IFAC

If supply chains are a concern, in collaboration with BSR, CDP, Ceres, The Climate Drive, Environmental Defense Fund, Exponential Roadmap, and the SME Climate Hub, we released a guideline on how to engage suppliers and, through that, build more resilient supply chains. See more here: Building Resilient Supply Chains: Getting the Most out of Supplier Engagement - We Mean Business Coalition

You can also find more information about climate reporting here: CDP: Turning Transparency to Action



# GHG REMOVALS AND CARBON CREDITS

E1-7 covers GHG removals and carbon credits. The purpose is twofold: first, to provide an understanding of the undertaking's actions to permanently remove or actively support the removal of greenhouse gases from the atmosphere, potentially in pursuit of net-zero targets; and second, to give insight into the extent and quality of carbon credits the undertaking has purchased or intends to purchase from the voluntary market, possibly to support its GHG neutrality claims.

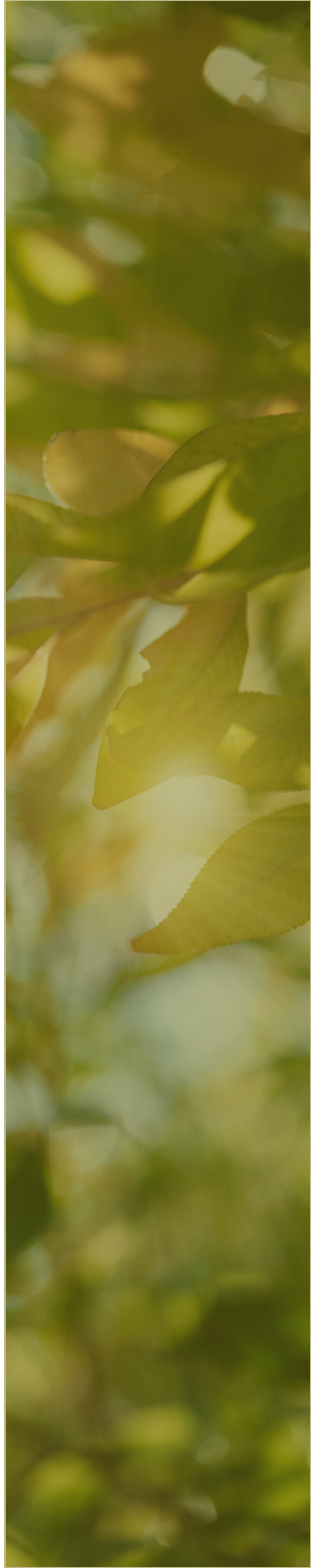
For investors and other stakeholders, it is important to understand how much of a company's potential residual emissions from a net-zero plan are expected to be addressed through such tools. There are many tools available in the market — some of high quality, others less so — and stakeholders need to understand the quality of those used or intended to be used. This enables them to evaluate whether the company may face reputational risk, if any of these tools prove to be non-viable.

As is evident from the wide variation in how companies report on GHG removals and carbon credits, this is an immature reporting area. Standardization of practices is likely needed to enable investors and other stakeholders to access comparable information and meaningfully incorporate it into their analyses. It is also clear that while some companies report the number of carbon credits cancelled, others report the "stock" of carbon credits purchased for future cancellation. The latter also raises financial reporting questions — for example, whether these carbon credit "stocks" should be capitalized and subject to impairment testing, which obviously will demand an effective market to exist to provide reliable pricing for inclusion in financial statements.

Half of the companies use GHG removals or carbon credits. But some have found it material to report explicitly that they do not use carbon credits and have no intention of doing so. Others report that they are not using them yet but are considering it.

| Carbon removals and carbon credits | No. of companies |
|---|---|
| Report on current use of carbon removals/carbon credits | 50 |
| Do not use carbon removals/carbon credits yet, but intend to do so in the future | 14 |
| Report specifically of no intention to use carbon removals/carbon credits | 5 |
| Do not report on this topic | 24 |
| | |
| **Total** | **93** |

The first example is a fairly standard one, from Essilor (p. 378), where they distinguish between removals and reductions. They also explain the basis of the different tools used and the verification standards through which the projects have been assessed. Note also the reporting of planned cancellations at the bottom of the note.

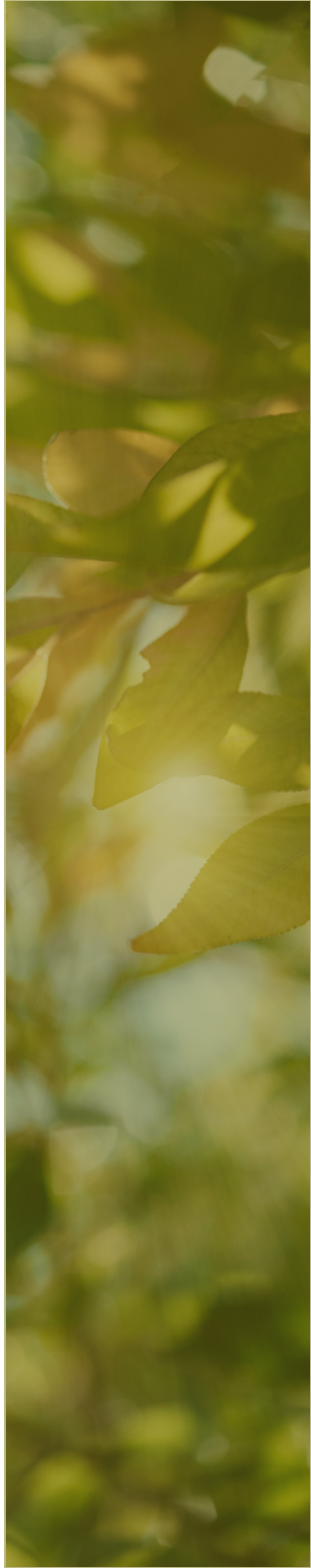


| Carbon Credits canceled in the reporting year | Verification standard | $tCO_2e$ |
|---|---|---|
| **TOTAL CREDITS CANCELED** | - | **81,482** |
| Removal – afforestation | Verified Carbon Standard | 17,000 |
| Reduction – solar panel installation | Verified Carbon Standard | 44,682 |
| Reduction – solar panel installation | Verified Carbon Standard | 19,800 |
| SHARE FROM REMOVAL PROJECTS *(%)* | | 21% |
| SHARE FROM REDUCTION PROJECTS *(%)* | | 79% |
| % for each recognised quality standard | 100% | 100% |
| % issued from projects in the EU | -% | -% |
| % that qualifies as a corresponding adjustment under Article. 6 of the Paris Agreement | | -% |
| Carbon credits planned to be canceled in the future | | 23,318 |

An alternative approach is to focus on the name of the fund and the projects within it, as well as the location of the projects. See this example from Hermès (p. 105):

In 2024, the projects that issued carbon credits for Hermès are as follows:

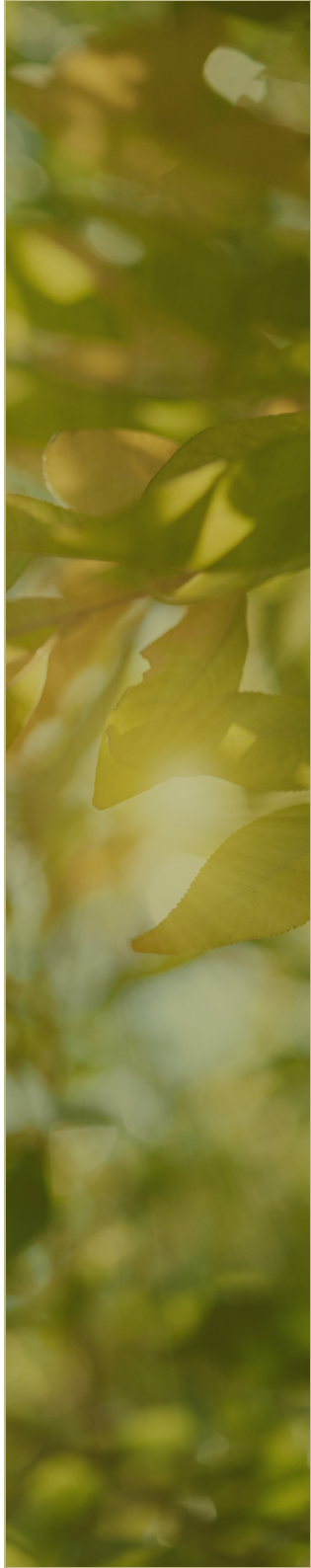
| Fund | Project | Country | Type | Verifier |
|---|---|---|---|---|
| **LCF1** | Hifadhi 1 | Kenya | Rural energy (stoves) | Gold Standard |
| | Tiipaalga | Burkina-Faso | Rural energy (stoves) | Gold Standard |
| **LCF2** | Chitetezo | Malawi | Rural energy (stoves) | Verra |
| | Hifadhi 2 | Kenya | Rural energy (stoves) | Gold Standard |
| **EcoAct** | Masaka | Uganda | Rural energy (stoves) | Gold Standard |



One could consider combining the solutions from Essilor and Hermès – that could be an even more informative solution. In the following example from Capgemini (p. 221), they also provide information about the methodology used to calculate reductions and removals — demonstrating a very transparent approach to reporting.

**Total amount of carbon credits outside value chain that are verified against recognised quality standards and cancelled**

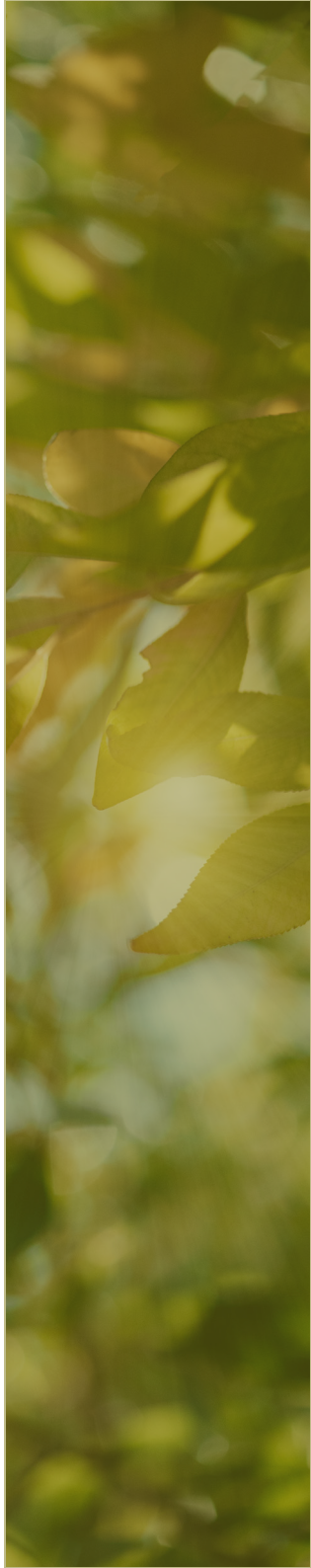
| Project Name | Project Category | Project Type | Registry | Standards | Methodology | Volume retired in 2024 ($tCO_2e$) |
|---|---|---|---|---|---|---|
| XICO2e Carbono Vencedores y Anexos | Removal | IFM | Climate Action Reserve | 1. CAR | MFP v3.0 | 5,411 |
| XICO2e Carbono Forestal Ejido San Jose de Miravalles | Removal | IFM | Climate Action Reserve | 1. CAR | MFP v3.0 | 1,606 |
| XICO2e Ejido Pueblo Nuevo | Removal | IFM | Climate Action Reserve | 1. CAR | MFP v3.0 | 23,064 |
| XICO2e Ejido las Pintas, San Dimas | Removal | IFM | Climate Action Reserve | 1. CAR | MFP v3.0 | 1,062 |
| KOKO Kenya | Avoidance/ reduction | Ethanol Cookstoves | Gold Standard | 1. GS | AMS-I.E. | 39,000 |
| Gyapa Cook Stoves Project in Ghana | Avoidance | Improved Cookstoves | Gold Standard | 1. GS | GS TPDDTEC v 2 | 136,153 |
| Brazilian Amazon APD Grouped Project | Avoidance | Avoided Planned Deforestation | Verra | 1. VCS 2. CCB | VM0007 | 76,243 |
| TIST Program | Removal | Agroforestry | Verra | 1. VCS 2. CCB | AR-AMS0001 | 873 |
| Miaoling Afforestation | Removal | Afforestation | Verra | 1. VCS 2. CCB | AR-ACM0003 | 4,000 |
| Guoluo Grassland | Removal | Grassland | Verra | 1. VCS 2. CCB | VM0026 | 21,900 |
| Delta Blue Carbon | Removal | Mangroves | Verra | 1. VCS 2. CCB | VM0033 | 5,000 |
| **Sub-Total Removal** | | | | | | **62,916 √** |
| **Sub-Total Avoidance/Reduction** | | | | | | **251,396 √** |
| **Total** | | | | | | **314,312 √** |



Total (p. 338) does not currently use carbon credits, but they already anticipate using some from 2030 onwards. Below is an overview of the carbon credits they have in "stock" as of the end of 2024:

| Carbon credits used in the reference year (2024) | 0 |
|---|---|
| **Number of certified credits in stock at the end of the reference year (2024) scheduled to be used from 2030 onwards** | **13 700 000** |
| Part relating to removal projects *(%)* | 0.43% |
| Part relating to reduction projects *(%)* | 99.57% |
| Part relating to VCS[(a)] certifications *(%)* | 80.5% |
| Part relating to Anreu[(b)] certifications *(%)* | 0.1% |
| Part relating to ACR[(c)] certifications *(%)* | 19.5% |
| Part issued in the context of EU projects *(%)* | 0.0% |
| Part that can be considered as a corresponding adjustment under Article 6 of the Paris Agreement | 0.0% |

(a) Verra's Verified Carbon Standard (VCS).
(b) Australian National Registry of Emissions Units.
(c) American Carbon Registry.



In contrast, we see an example from Orange (p. 396). Note how they explain their decision not to disclose projected carbon credit needs, citing business confidentiality. This is highly unusual.

### 4.2.3.7.2 E1-7 – GHG removals and GHG mitigation projects financed through carbon credits

Orange believes that the disclosure of its projected carbon credit needs is a strategic item covered by business secrecy for its net zero carbon strategy and does not wish to disclose any forward-looking information on this subject.

→ Disclosure Requirement E1-7 – GHG removals and GHG mitigation projects financed through carbon credits

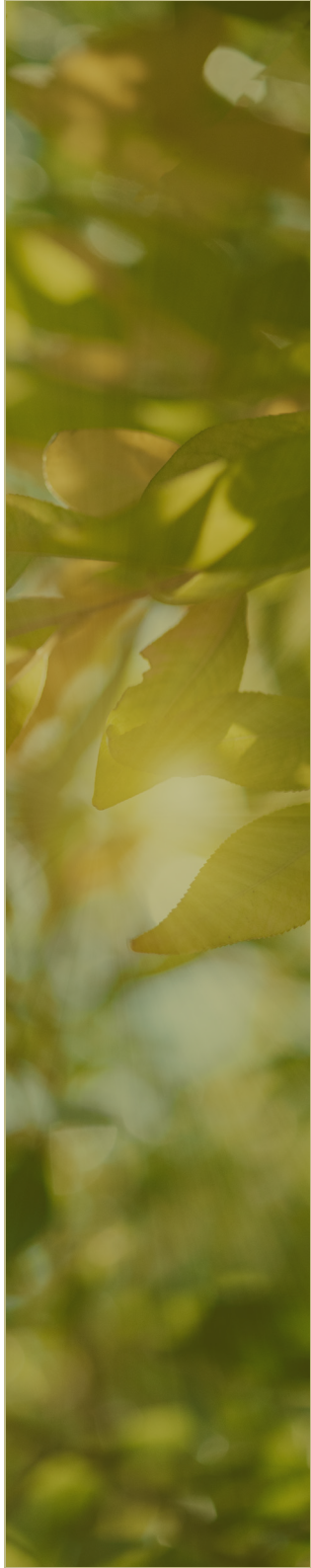
| PILIER C (NZI)/ Negative emissions | Units | 2024 | 2023 | % 2024-2023 cb |
|---|---|---|---|---|
| | | Group | Group | Group |
| Negative emissions | | - | - | |
| Carbon sequestration credits | Tons $CO_2$eq | - | - | |
| Carbon avoidance/ reduction credits | Tons $CO_2$eq | - | - | |

| Removals | Comparative | 2024 | % Y/Y-1 |
|---|---|---|---|
| *GHG removal activity 1* | | | |

If you're unsure how to approach this topic, consider exploring the Beyond Alliance — a platform where companies collaborate to address shared challenges and scale credible, high-impact climate solutions. Convened by We Mean Business Coalition in partnership with Conservation International, Environmental Defense Fund, WWF, and the UN Environment Programme, Beyond helps companies with the emerging disclosure regulations through trainings and peer learning.

It also supports greater integrity, scale, and impact in carbon markets and beyond-value-chain mitigation. Learn more here: Resources Archive - Beyond Alliance

Another interesting resource comes from the USA, where California's reporting regulation for voluntary carbon market disclosures perhaps is a bit more precise than the CSRD. See more here: Bill Text - AB-1305 Voluntary carbon market disclosures.



# INTERNAL CARBON PRICES

Internal carbon pricing is addressed under E1-8: Internal Carbon Pricing. The purpose is for the undertaking to disclose whether it applies internal carbon pricing schemes and, if so, how these schemes support decision-making and incentivize the implementation of climate-related policies and targets.

For investors and other stakeholders, it is important to understand whether such schemes are in place, as this can indicate a more deeply embedded transition strategy — for example, if emissions are considered when the company enters new contracts, invests in capital expenditures, evaluates R&D, etc.

Internal carbon pricing is still a relatively immature reporting area. Moreover, not all companies use internal carbon pricing schemes, and as a result, only about half of the companies have considered it material to report on.

| Internal carbon prices | Number of companies |
|---|---|
| Reports on using internal carbon prices | 42 |
| Refers to internal carbon prices, but it is unclear how they are used | 5 |
| Not reported | 46 |
| | |
| **Total** | **93** |

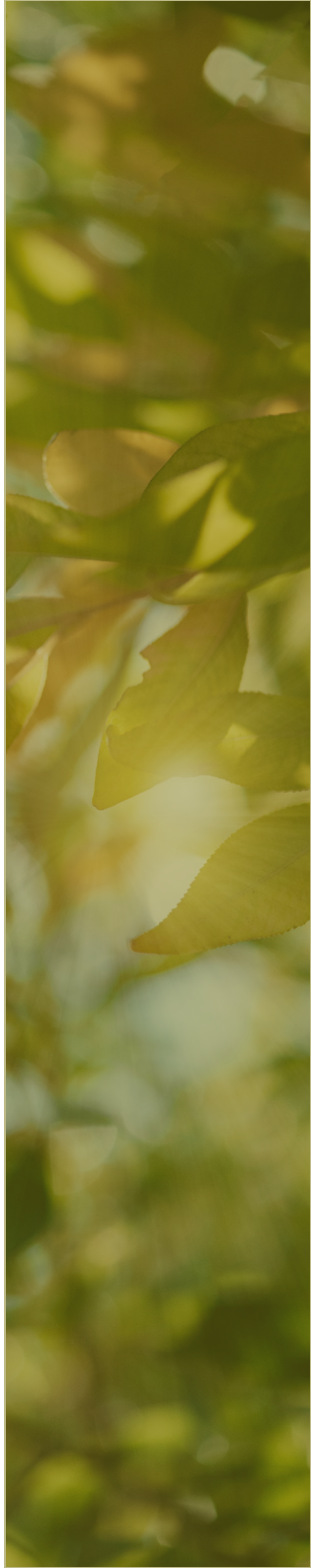
The first example is from Mercedes-Benz (p. 158), where they explain how internal carbon prices are used in their R&D activities.

**Internal carbon pricing**

To evaluate internal decision-making processes, the Mercedes-Benz Group uses internal carbon pricing systems.

In product development (the focus is on efficiency measures in vehicle projects), the Mercedes-Benz Group takes into account different fleet emissions regulations depending on the region. For example, if the legally defined EU fleet limit of 95 g $CO_2$/km is exceeded in the EU, the Mercedes-Benz Group must pay penalties to the EU of €95 per vehicle sold for each gram. For vehicles and regions where fleet emission regulations apply, around 61 million tons of the greenhouse gas emissions of the Mercedes-Benz Group in 2024 (Scope 1, 2 and 3) are attributable to vehicle operation (tank-to-wheel), which corresponds to about 47%.

In its own production, the Group takes into account the $CO_2$ emission rights of the EU emissions trading system for energy-related projects (e.g., plant supply, energy production, and new energy consumers), which is a key climate policy instrument in Europe. In the reporting year, the price for exchange-traded EU emission rights was between €50 and €80/t $CO_2$. Currently, approximately 269 kilotons of $CO_2$ emissions caused by the Mercedes-Benz Group in Scope 1 and 2 are covered under the EU Emissions Trading System, which corresponds to about 52%. In addition to these emission trading prices, $CO_2$ prices from the German Fuel Emissions Trading System (€45 per ton of $CO_2$ in 2024) are also considered as far as applicable for the project.



Heineken (p. 176) has recently begun using internal carbon prices when evaluating business cases. They apply different prices depending on the market context for each case.

Carbon prices follow the IEA's Global Energy and Climate Model guidelines and will be reviewed annually to incorporate any major changes.

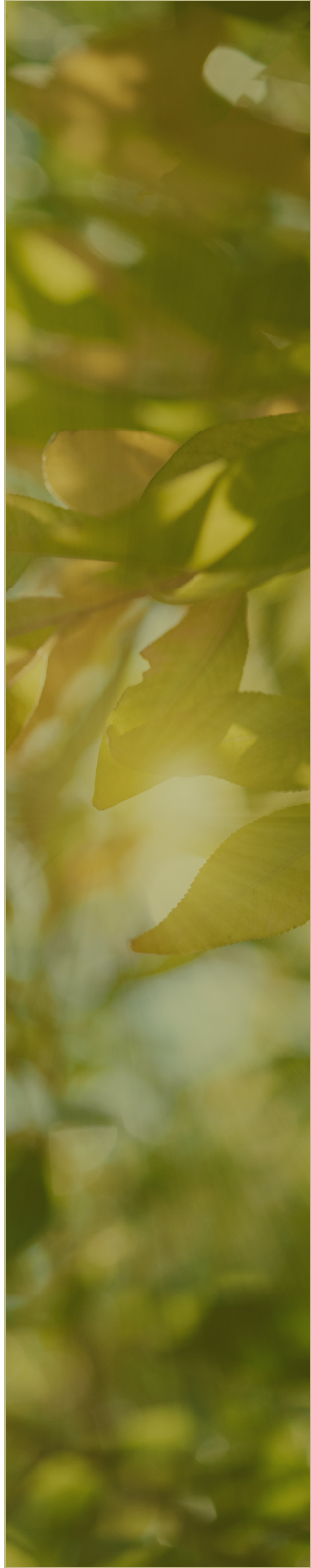
| Classification | Country examples | Carbon price 2024-2030 (€/t$CO_2$eq) | Carbon price 2031-2040 (€/t$CO_2$eq) |
|---|---|---|---|
| Advanced economies with net zero emission pledges | European Union, United Kingdom, New Zealand | 130 | 191 |
| Emerging market and developing economies with net zero emission pledges | South Africa, India, Singapore | 84 | 149 |
| Selected emerging market and developing economies | Brazil, Mexico, Nigeria | 23 | 79 |
| Other emerging market and developing economies | Cambodia, Egypt, Jamaica | 14 | 33 |

The inclusion of internal carbon pricing in business cases was limited in 2024. With the policy update, we anticipate a more consistent integration of shadow pricing moving forward.

Hapag-Lloyd (p. 180) also uses internal carbon prices in their asset impairment testing — a highly unusual and interesting practice.

*(E1-8.63a)* **Carbon pricing scheme by type**

| | Prices applied (EUR/t $CO_2$e) |
|---|---|
| CapEx shadow price | 82 |
| Carbon prices for impairment testing | 78 |



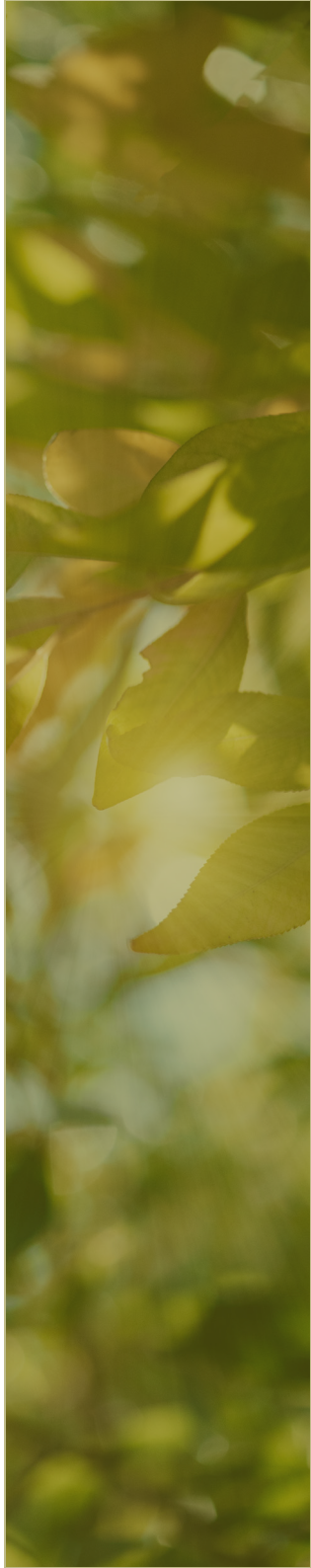
Sanofi (p. 42) uses internal carbon prices for a range of purposes. See this overview, where they also explain the GHG volume involved in the evaluation.

The table below shows a more detailed description of the different types of internal carbon prices used by Sanofi.

| Types of internal carbon prices | Volume concerned ($tCO_2e$) | Prices applied (€/$tCO_2e$) | Scope description |
|---|---|---|---|
| CAPEX shadow price | 15% energy reduction under Scope 1 & 2 target | 100 | Enforcement is not yet systematic, but Sanofi intends to apply it to all business decision-making processes where CAPEX is involved |
| R&D investment shadow price | - | - | - |
| Internal carbon fee or fund | - | - | - |
| Carbon prices for impairment testing | 55% Scope 1 & 2 and 30% Scope 3 | 100 | The cost of transition assessment was used for impairment testing. The internal carbon price was only used where market forecasts were not available, i.e. renewable energy costs are based on market forecasts, while supplier engagement impacts are based on the internal carbon price in the absence of tender data |
| Carbon prices for supplier engagement / decarbonized supply | 75% of supplier-related emissions | 100 | 1. To estimate the additional cost of goods related to the purchase of lower-carbon raw materials in support of strategic financial planning decisions, e.g. supplier engagement on transition to renewable energies, green aluminum, regenerative agriculture in egg supply, etc.<br>2. Applied to priority raw material tenders |

Schneider Electric (p. 156) differentiates based on the type of emissions and the volume at stake — which determines which carbon prices to apply.

| Types of internal carbon prices | Volume at stake ($tCO_2eq$) | Minimum price applied €/$tCO_2eq$) | Maximum price applied (€/$tCO_2eq$) | Volume of Gross scope 1 covered by scheme ($tCO_2eq$) | Volume of Gross scope 2 covered by scheme ($tCO_2eq$) | Volume of Gross scope 3 covered by scheme ($tCO_2eq$) |
|---|---|---|---|---|---|---|
| Carbon prices used in the context of the climate risk assessment | 55,792,899 | 0 | 647 | 106,365 | 37,348 | 55,649,186 |
| Marginal abatement Cost Curve | 2,540,000 | 0 | 0 | 0 | 0 | 2,540,000 |



Ferrovial (p. 93) uses internal carbon prices to evaluate a range of future projects. Note how they apply different carbon prices depending on the timing of each project.

*As the investment analyzed with shadow carbon pricing are made for future investments, no hedge emissions have been identified for this reporting period. This price is used as additional information when making decisions on new investments and is not included in the financial statements.*

**TIME HORIZONS**

2030 - 2040 - 2050

**TYPE OF PROJECT**

Airports

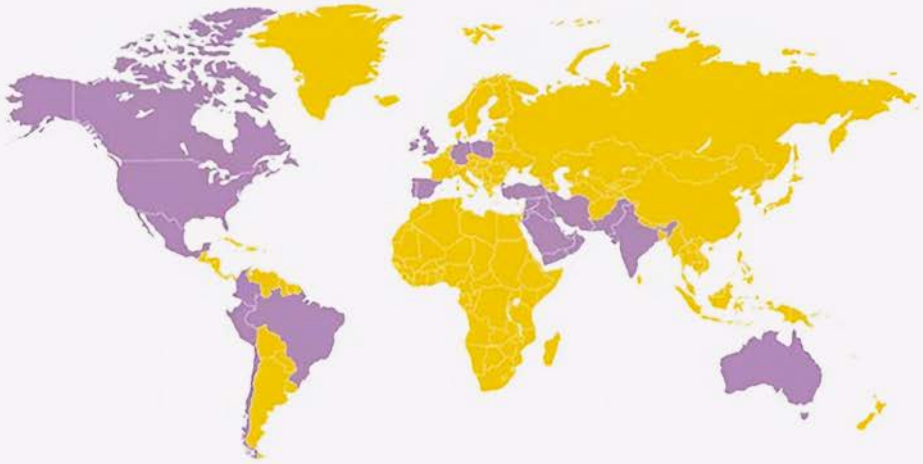
Toll Roads

Waste management

Water management

Energy assets (natural gas)

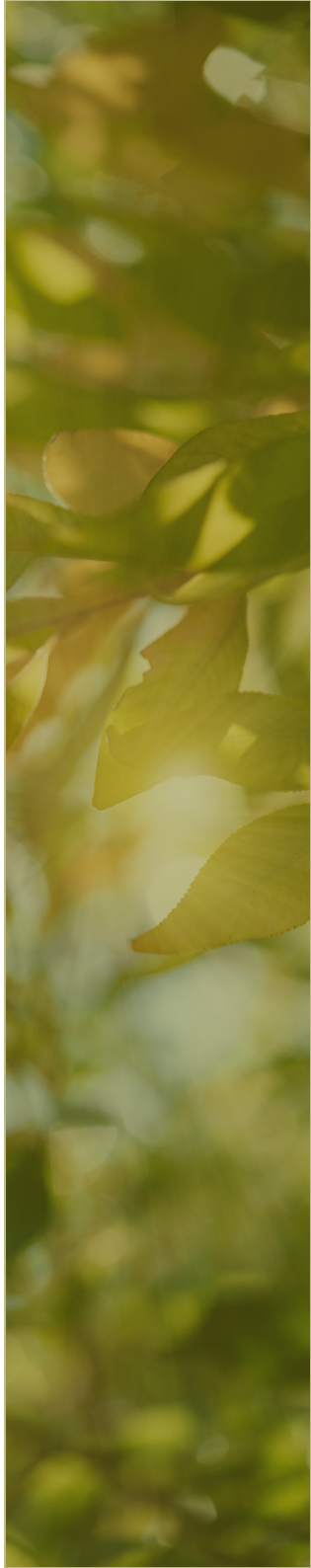
**GEOGRAPHIES***



*Geographies included in the methodology: Australia, Brazil, Canada, Chile, Germany, Ireland, Mexico, Middle East, Peru, Poland, Portugal, Spain, United Kingdom, U.S., India, Colombia

**FERROVIAL'S AVERAGE PRICE OF EMISSIONS:**

| 2030 | 2040 | 2050 |
|---|---|---|
| €60 | €114 | €173 |



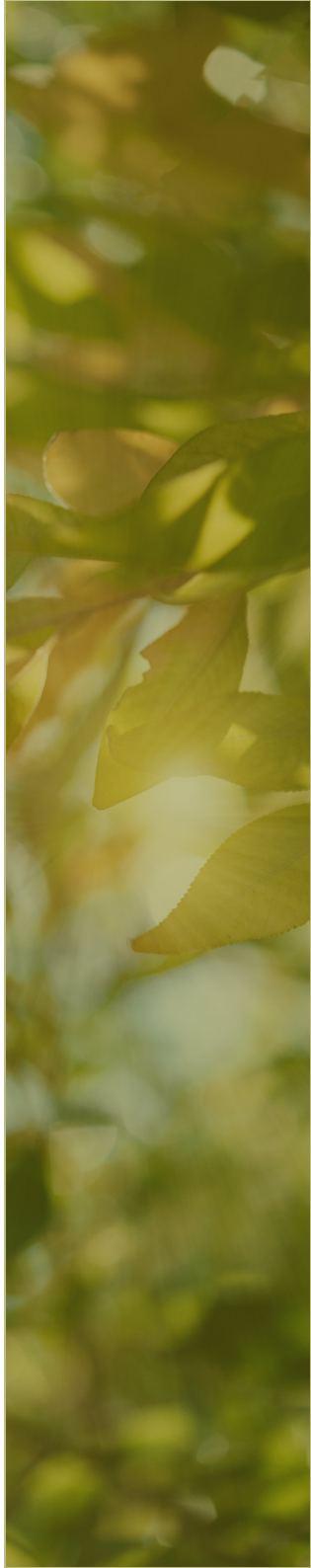
Finally, Saint-Gobain (p. 131) has established an internal carbon fund for employees, where locally saved GHG emissions are measured. The fund is then reinvested in new improvement projects, which employees decide on at the local level. The aim is to engage all employees in reducing emissions.

**An internal carbon fund for employees**

To engage all its employees on the road to the contribution to carbon neutrality by 2050, and to contribute to achieving the objective of reducing the Group's $CO_2$ emissions between now and 2030, in April 2021, Saint-Gobain launched an internal "Carbon Fund". First implemented in a pilot region, Northern Europe, it aims to accelerate the reduction of non-industrial $CO_2$ emissions through the daily actions of employees and targeted investments in sites. The areas covered by these investments are mainly related to the sustainable mobility of employees, renewable energies and the improvement of comfort and energy efficiency at Saint-Gobain sites. These projects proposed and selected by employees mainly concern their working environment. Organizational methods, thematic choices and priorities are defined by local organizations.

**As shown, there are many different approaches to the use of internal carbon pricing. If you want to learn more, WBCSD has published a helpful guideline:**

Navigating internal carbon pricing to drive decision-making and emissions reduction: three strategies for effective implementation | WBCSD



# SCENARIO TESTING & FINANCIAL REPORTING

From an investor's point of view, it is of utmost importance to identify the connection between the CSRD report and the financial report, and to understand the potential financial impact of climate change on the company's financial position. This logic underpinned the TCFD (Task Force on Climate-related Financial Disclosures), which in turn serves as the foundation for the CSRD—as well as other frameworks like the ISSB (International Sustainability Standards Board) and California's ESG reporting regulations.

This topic is addressed in E1-9 – Anticipated financial effects from material physical and transition risks and potential climate-related opportunities. It is closely related to ESRS 2 SBM-3 – Material impacts, risks, and opportunities and their interactions with strategy and the business model. Both are subject to "phased-in" disclosure requirements,[9] allowing companies to omit reporting in the first year of preparing their sustainability statement. Furthermore, companies may comply by providing only qualitative disclosures for the first three years, if preparing quantitative disclosures is impracticable.

The phased-in approach likely stems from the documented[10] experience with the TCFD. When TCFD was launched in 2017, many companies signed on. Over the following years, numerous organizations were able to report qualitatively on policies and strategies, and many also reported on GHG emissions. However, scenario analysis proved more challenging. Some companies attempted it qualitatively, a few incorporated also limited quantitative assumptions and outcomes, but very few monetized their assessments. We observed a similar pattern last year among early CSRD adopters.

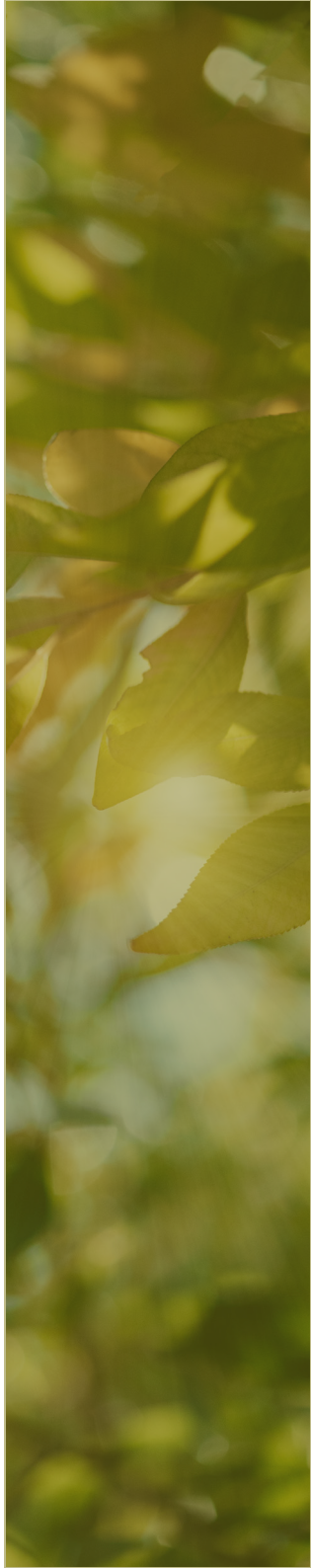
Despite the option to omit reporting on this topic—and the fact that many companies have indicated in the report that they use this phase-in flexibility—many also try, at least partially. Often, this effort is linked to the risk assessment conducted during the Double Materiality Assessment (DMA), which typically involves climate change scenarios.

In the sections that follow, we will explore why monetized climate risk reporting remains rare, review the various approaches companies are taking (some monetized, some not), focus in particular on physical climate risks—which are now materializing yet still infrequently monetized—and finally, examine another rarity within scenario reporting: opportunity reporting.

## DMA versus ERM

Before we examine the quantified and monetized elements, we need to address a fundamental aspect of the CSRD—specifically, the potential for coherence between the Double Materiality Assessment (DMA) and Enterprise Risk Management (ERM). Both processes focus on risk mapping. The DMA is conducted as part of the CSRD, often prior to or very early in the reporting year, while the ERM is part of the financial report and typically performed late in the reporting cycle.

ERM is most often based on two factors: the potential financial impact on the company, combined with likelihood—both measured as net risk, after considering remediation. In contrast, the DMA is based on the potential financial impact on the company combined with the potential impact on stakeholders, with both factors measured as gross risk, before remediation.



This discrepancy between gross and net risk is handled very differently among companies. Some attempt to bridge the gap by using the DMA as input for the ERM. However, for many, the outcomes of the DMA are so immaterial to the company's financials that it is not feasible to combine the two processes.

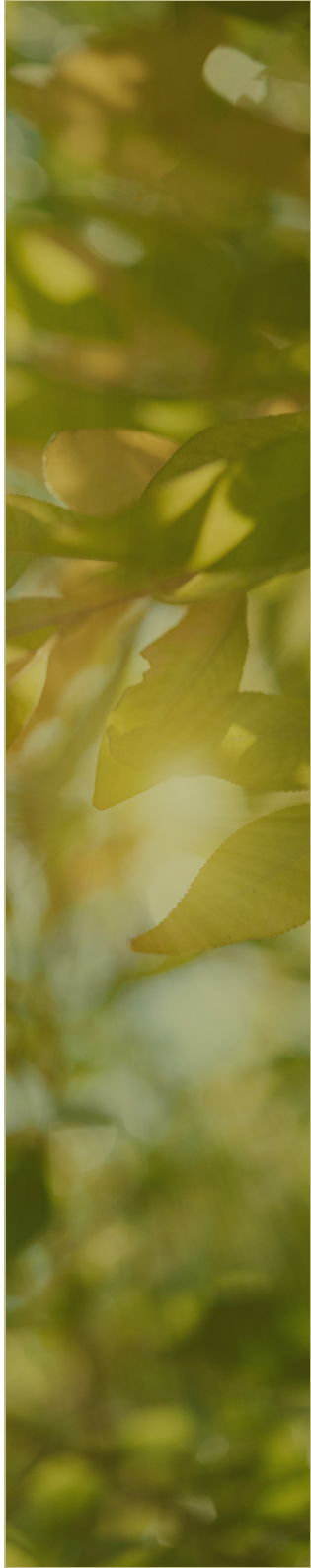
The first example comes from Henkel (p. 94), where they explain that they have aligned the thresholds used for both ERM and DMA:

**Integration of the process for identifying, assessing and managing impacts and risks into the risk management process** *(IRO-1_53e)*

The sustainability-related risks identified during the materiality assessment have been integrated into the risk management and enterprise-wide risk reporting process. The financial threshold for classifying a risk as material within the framework of the double materiality assessment has been aligned with the thresholds used in the risk management process.

Stellantis (p. 177) presents it slightly differently: the ERM and DMA are conducted independently, but they are compared to ensure alignment.

In 2024, the annual enterprise risk assessment and double materiality assessment were conducted independently from each other however, results of these two assessments have been compared to ensure alignment. Refer to *Risk Management,* included elsewhere in this report and *Double Materiality Assessment* for additional information.



At the other end of the spectrum, we have Dassault (p. 92), which explains why material risks identified in the DMA are simply not considered material within the ERM.

> *Financial Impact of the Company's negative Impacts and Risks*
> Dassault Systèmes' risk management framework already covers the material risks identified in the DMA. These identified material risks are gross risks, in application of the methodologies developed by the European Commission; they therefore do not take into account any mitigation measures in place to reduce the potential net financial effects. Consequently, no significant risks of material adjustment to the carrying amounts of assets and liabilities to be reported in the financial statements in the next annual reporting period have been identified.

We observe various conclusions similar to Dassault's and therefore urge regulators to address this unfortunate situation. To ensure better financial coherence, we recommend that the DMA be based on net risk after remediation, rather than gross risk before remediation. This would prevent companies from spending time and resources on risks that are unlikely to materialize due to effective remediation measures. It would also enhance the usability of the DMA within financial departments, as the risks identified would be truly material and therefore not only can but must be considered as input to the ERM—as well as for impairment tests, provisions, contingent liabilities, and other financial assessments.

## Risks considered in the financial report

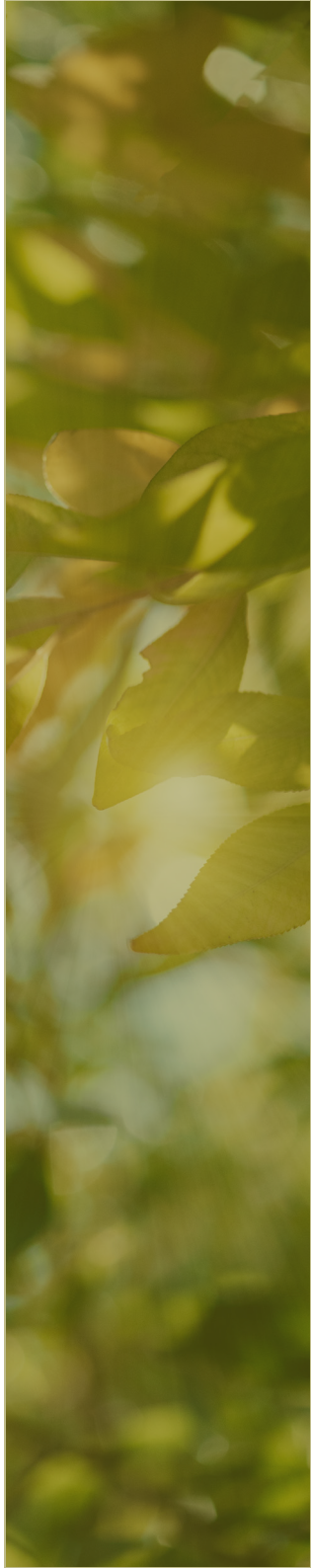
In the following section, we will focus on companies that have attempted to include climate risks in their financial reports. The first example is from Air Liquide (p. 252), which concludes that climate risks would not have an effect on its financials. However, the mere fact that these risks were considered during the asset impairment process holds significant value for investors and other stakeholders.

> **At the end of 2024, no significant impact has been identified, either on the useful life or on the value of the assets, on the client portfolio or on the cash flows generated by existing activities or on provisions for risks and charges.**

Impairment tests are also conducted at Total (p. 323); see the outcome below:

> **C. Impairment of Upstream assets**
>
> In addition, to ensure robust accounting of its assets in the balance sheet, for the purposes of calculating asset impairment, the Company assumes oil price trajectory that remains sustained at $\$_{2024}$70/b until 2030, then decreases linearly to reach $\$_{2024}$50/b in 2040 and then decreases from 2040 onwards to the price adopted in 2050 by the IEA's NZE scenario, ie. $\$_{2024}$25.8/b. Gas prices used in Europe and Asia decrease and stabilize from 2027 until 2040 at respectively $\$_{2024}$8/Mbtu and $\$_{2024}$9/Mbtu at levels lower than current prices; the Henry Hub price remaining at $\$_{2024}$3/MBtu over the period 2025-2040. They then all then converge towards the prices in the IEA's NZE scenario in 2050.The impairment tests also retain an internal carbon price (refer to point 5.2.1.3 (E1-8)).

Another, more detailed example comes from L'Oréal (p. 321), where they explain how they have considered both climate and nature risks in assessing the net carrying amounts of each of their goodwill and brands.



A 1% decrease in the terminal growth rate on all the Group's Cash Generating Units would lead to an impairment loss risk of around €14.8 million.

The terminal growth rate is consistent with market data, i.e. 2.5% for Europe and 3.0% for the rest of the world.

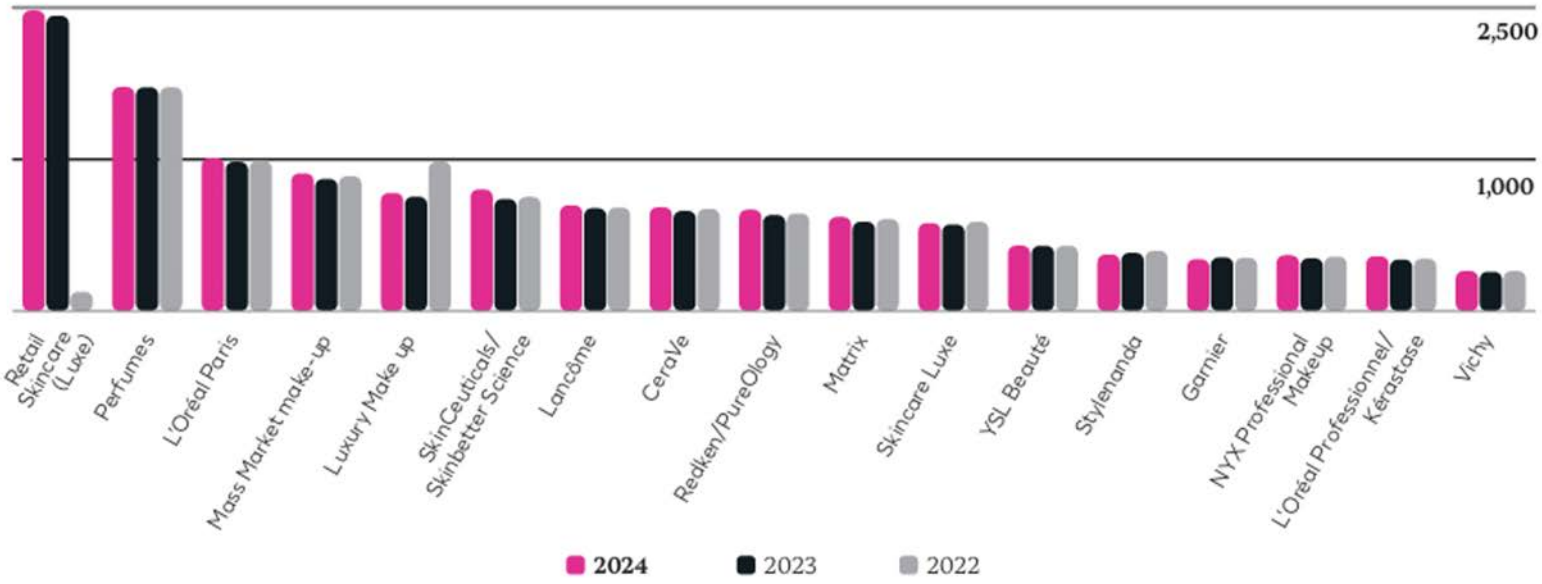
A 1-point decrease in the margin rate over the business plan period on all the Group's Cash Generating Units would lead to an impairment loss risk of around €17.2 million.

**Climate change risks and opportunities**

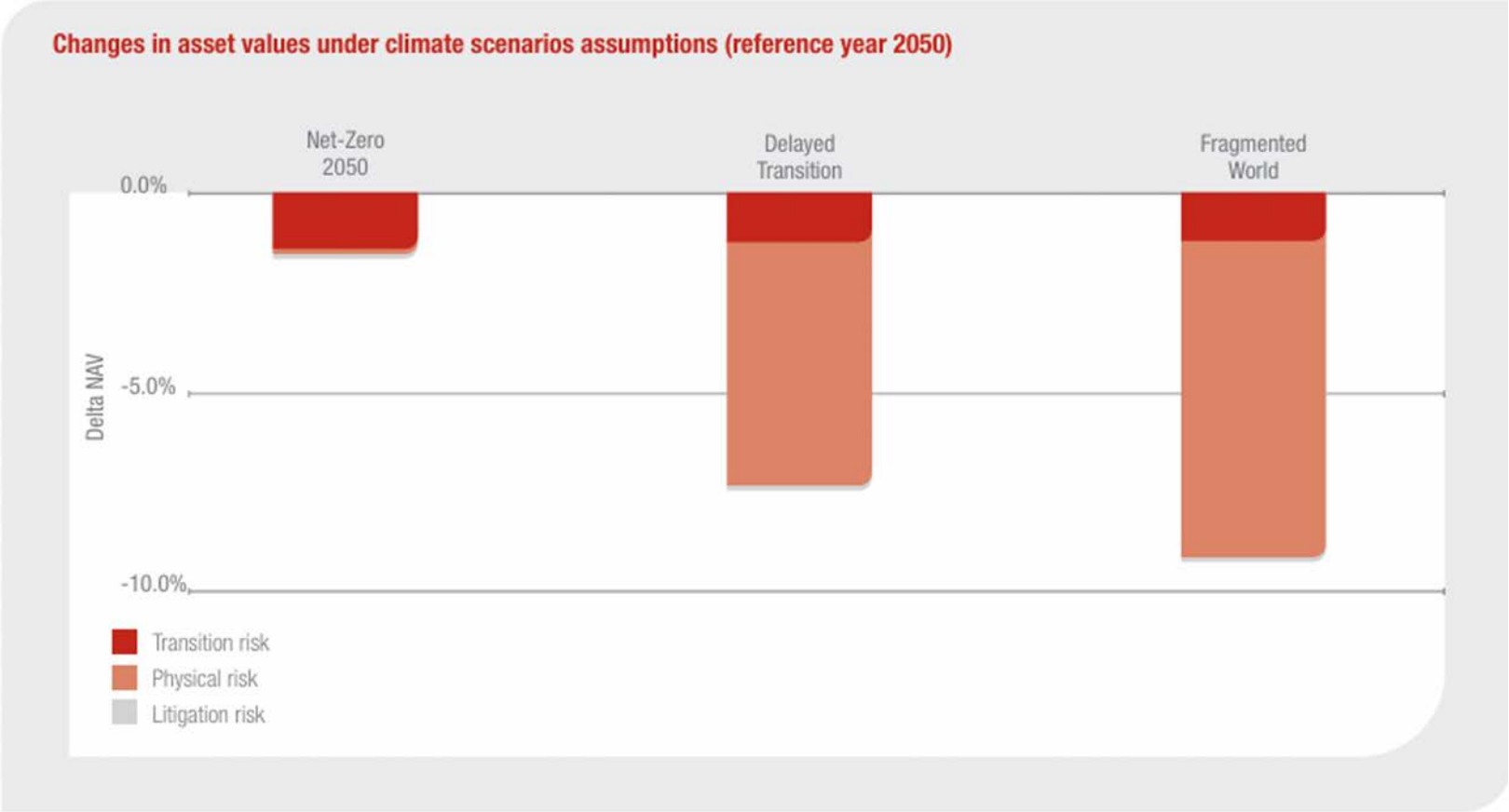
L'Oréal used two opposing scenarios to measure the risks and opportunities related to climate change that could impact the Group's activities in the medium and long term. The methodology used is in line with the practices of the TCFD (Task Force on Climate-related Financial Disclosures) and the TNFD (Taskforce on Nature-related Financial Disclosures). The scenarios used are:

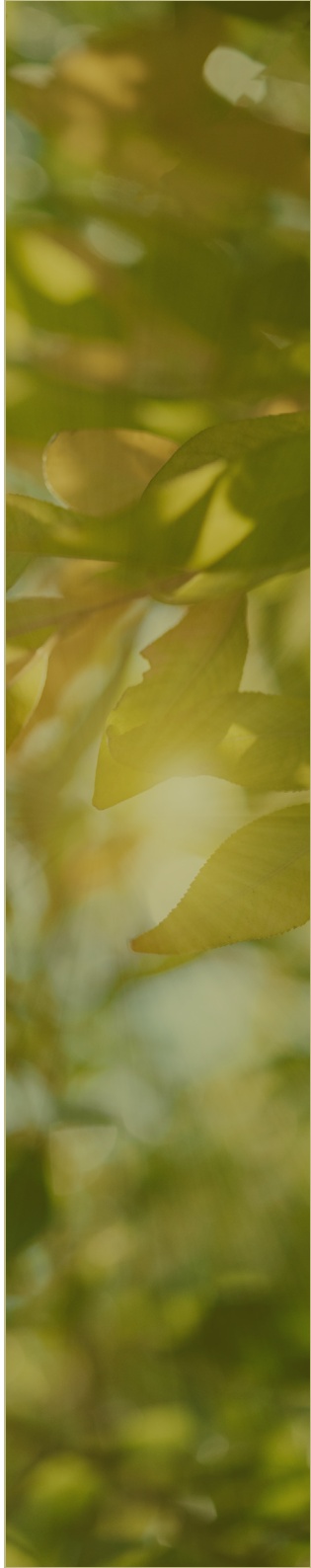
- the IPCC SSP1-2.6 scenario (formerly RCP 2.6) called Climate Nature Equilibrium. This scenario foresees strong international cooperation to limit global warming to 1.5°C, in line with the Paris Agreement, by focusing on sustainable development and effective climate policies;
- the IPCC SSP5-8.5 scenario (formerly RCP 8.5) called Disorderly and Degraded based on warming above 4°C, with strong population growth, limited environmental regulations and minimal efforts to combat climate change. The integration of these scenarios into the business plans of the CGUs at risk did not reveal any significant impact likely to generate a risk of depreciation of assets.

The net carrying amount of goodwill and brands with indefinite useful life breaks down as follows for the largest Cash Generating Units:



Generali (p. 98) has attempted to assess changes in asset values under various scenarios, using 2050 as the reference year.

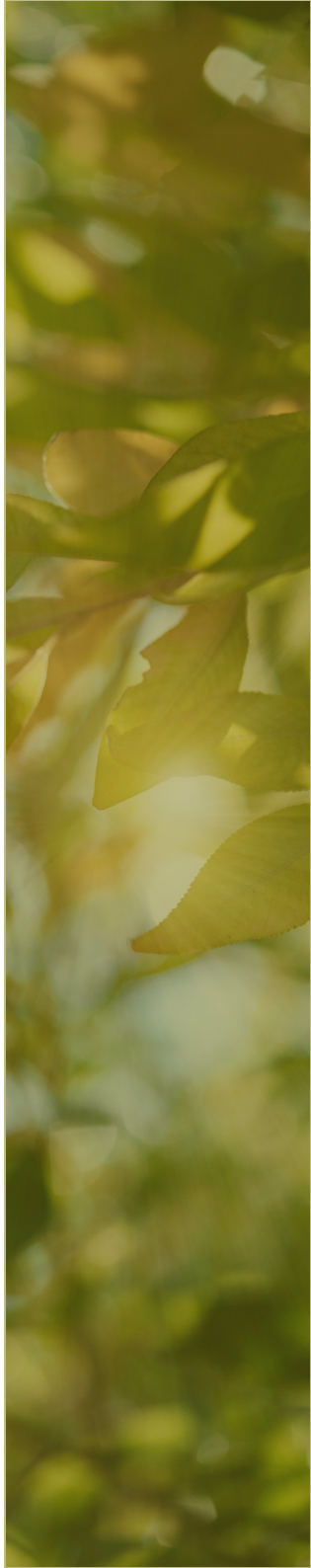


An interesting approach comes from Cellnex (p. 191), which has assessed each risk by identifying the potential financial line item it could affect and the likely direction of that impact.

**Climate-related risks**

| | Type of risk | Cod | Specific risk | Time horizon | Description | Potential financial impact | Impact |
|---|---|---|---|---|---|---|---|
| Transition risks | Market | RC1 | Uncertainty in renewable energy and carbon offsets prices can increase costs related to achieve the Company's decarbonisation roadmap (Scope 1&2) | Medium-term | Risk of price increases for GdOs and carbon emissions. Currently Scope 1 and 2 of the carbon footprint are mitigated by purchasing GdOs, Scope 2 and offsetting Scope 1, an increase in the price of these could increase the cost of the decarbonisation strategy. | ↑ OpEx increase due to rising price of GdOs and price of carbon | Low |
| | Policy and legal | RC2 | Stringent climate-related legislation can lead to sanctions due to non-compliance (e.g. fluorinated gases) | Short-term | Risk associated with compliance with Regulation (EU) 573/2024 of the European Parliament and of the Council on fluorinated greenhouse gases. Failure by Cellnex to comply with the new obligations could result in financial penalties under this regulation. | ↑ Liabilities increase due to potential sanctions | Low |
| | Reputational | RC3 | Failure to engage with the value chain (customers, suppliers and landlords) to achieve the decarbonisation roadmap (Scope 3) | Medium-term | Risk in engaging the value chain to take the necessary actions to reduce their emissions (Cellnex's scope 3) and achieve the company's decarbonisation strategy. | ↑ OpEx and/or CapEx increase associated with collaborative projects with clients, suppliers and landlords | Low |
| Physical risks | Acute | RC4 | Increasingly extreme climate events, including forest fires, strong winds, storms and river flooding, pose a significant threat to infrastructure due to their frequency and severity. | Medium-term | Acute physical risk projected in the short term (2020-2040), medium term (2040-2070) and long term (2070-2100) at the sites caused by extreme climate events.<br><br>The climate variables that could cause significant damage to sites are strong winds, wildfires and landslides. By 2040, 31% of Cellnex sites are at high and critical risk from these variables. | ↑ CapEx increase in the case of site reconstruction | Low |
| | Chronic | RC5 | Rising temperatures can increase cooling needs for sites and therefore energy costs. In addition, rising sea levels may jeopardise the location of certain sites, requiring the dismantling and relocation | Long-term | Chronic physical risk caused by the increase in temperature and sea level rise projected up to 2100.<br>Temperature does not pose a high or critical risk to Cellnex sites until 2040. From 2040 onwards, it represents:<br>• In the realistic scenario:<br>◦ 2.3% of sites between 2040-2070<br>◦ 6.5% of sites between 2070-2100<br>• In the worst-case scenario:<br>◦ 6% of sites between 2040-2070<br>◦ 28% of sites between 2070-2100<br>• Increase in temperature would represent an increase in the energy consumption of cooling systems and affect optimal operating conditions.<br>Sites affected by sea level rise with high and critical risk up to 2100 represent about 1% of the sites in the realistic and worst-case scenarios.<br>• Rising sea levels could cause the relocation of sites affected by the retreat of the coastline. | ↑ OpEx increase due to energy consumption<br>↑ CapEx increase due to ouplacement of sites | Low |



Finally, KBC (p 276) has provided an overview of where climate risks have been considered in the financial report—a very user-friendly presentation.

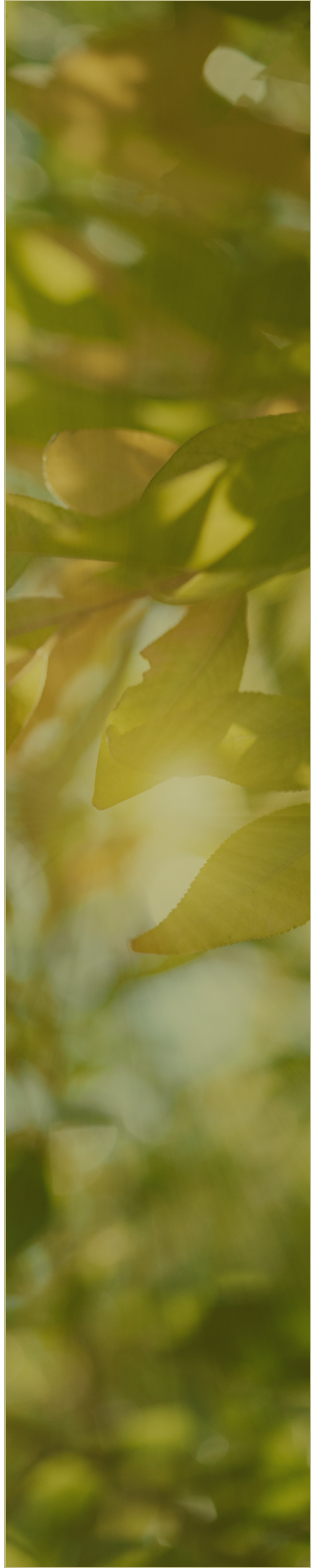
All notes and other sections in the Annual Report in which direct or indirect reference is made to the climate and/ or climate-related risks or sustainability in general are set out below.

**In the 'Report of the Board of Directors':**

- See 'How do we create sustainable value?' in 'Our business model'
- See 'What are our main challenges?' in 'Our business model'
- See 'Our role in society' in 'Our strategy'
- See 'Our business units' for each country under 'Our role in society'
- Sustainability statement

**In the 'Consolidated financial statements' (in the notes below each table):**

- Note 3.9: Impairment
- Note 4.1: Financial assets and liabilities, breakdown by portfolio and product
- Note 5.4: Property and equipment and investment property
- Note 5.5: Goodwill and other intangible assets
- Note 5.9: Retirement benefit obligations
- Note 6.2: Leasing



## Physical risks

From our discussions with financial institutions, one of the most prominent climate-related concerns is physical risk—for example, droughts, flooding, wildfires, etc. It is easy to understand why these risks can be material for the financial institutions (and in reality, also their customers): physical climate change can directly affect the value of assets. Such risks can also influence the cost of insuring those assets. Similarly, banks with loan exposure to companies in sectors or geographical areas vulnerable to physical changes may consider raising interest rates on higher-risk loans.

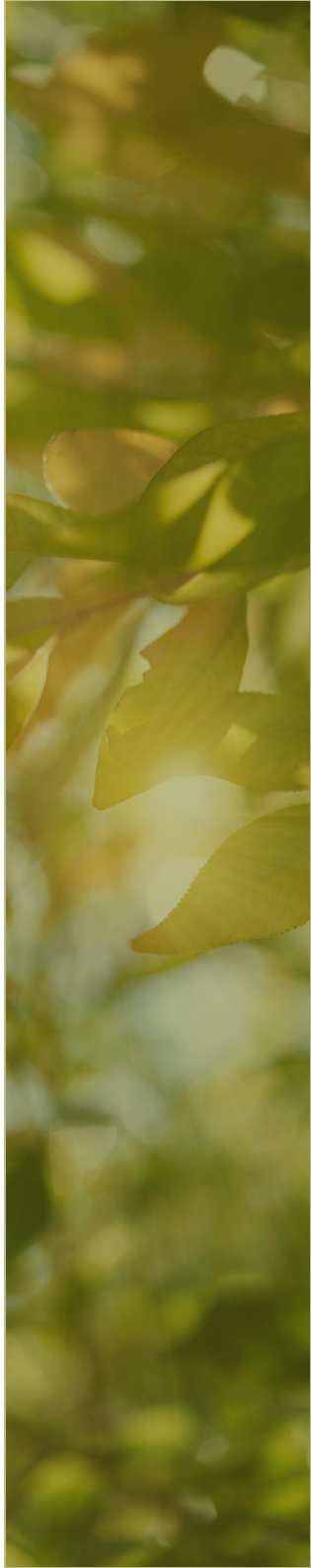
But this cost dynamic may also help explain why some non-financial companies may be hesitant to disclose such information.

However, under standard financial reporting rules—such as those for impairment testing, provisions, and contingent liabilities—this reluctance may not align with regulatory requirements, particularly if the risks are both likely and material after remediation.

In the following section, we focus on how companies report on physical climate risks. The first example comes from Endesa (p. 232), where they provide a list of the chronic physical change variables they consider. This type of overview is essential as a foundation for meaningful scenario testing.

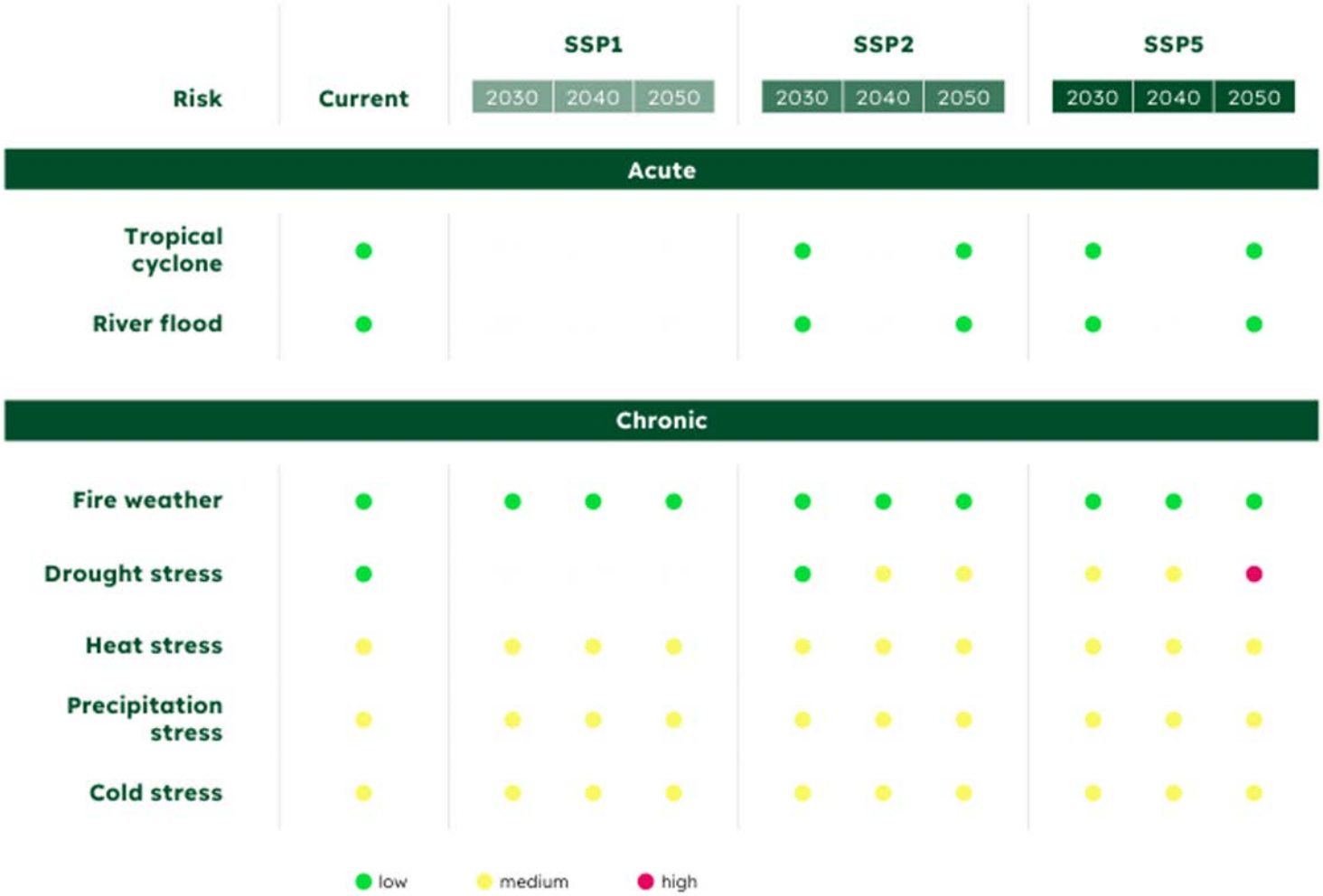
The main impacts as a consequence of chronic physical changes would be seen in the following variables:

| Variables | |
|---|---|
| **Electricity Demand** | • Variation of the average temperature level with potential effect (increase/decrease) on electricity demand. |
| **Thermoelectric production** | • Variation of the mean temperature level of water bodies with effect on thermoelectric production. |
| **Hydroelectric production** | • Variation in the average level of rain and snowfall and temperatures with potential increase and/or reduction of hydropower production. |
| **Photovoltaic Production** | • Variation of the average level of solar radiation, temperature and rainfall with potential increase and/or reduction of PV production. |
| **Wind Power Production** | • Variation of the average wind regime level with potential increase and/or reduction of wind production. |
| **Value Chain** | • Variation in the average level of the rainfall regime with potential impact on the supply chain. |



The next example is from Heidelberg (p. 104), which has created an overview assessing each risk factor across three scenarios and over three time horizons.

**Group-wide physical climate risks scenario analysis**



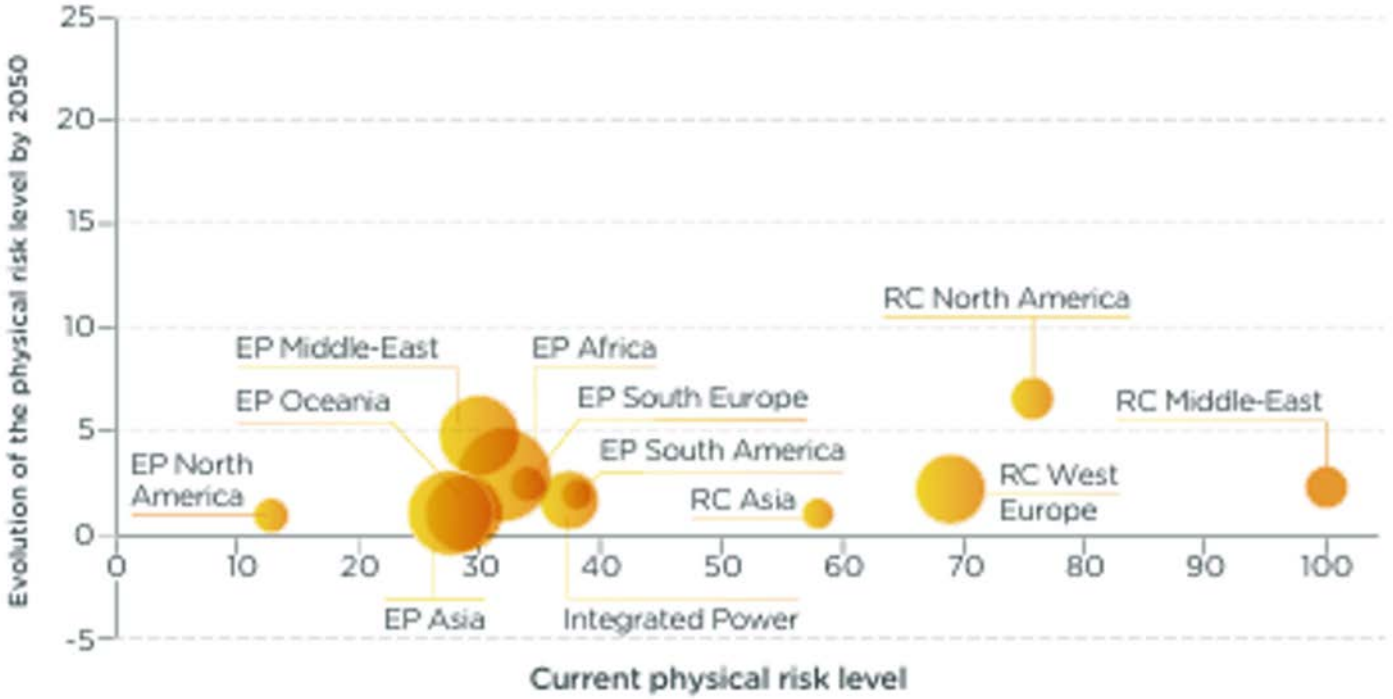

1) Missing dots in the graph indicate that no specific assessment is available.

Total (p. 324) provides an overview of its physical risks for each onshore asset.

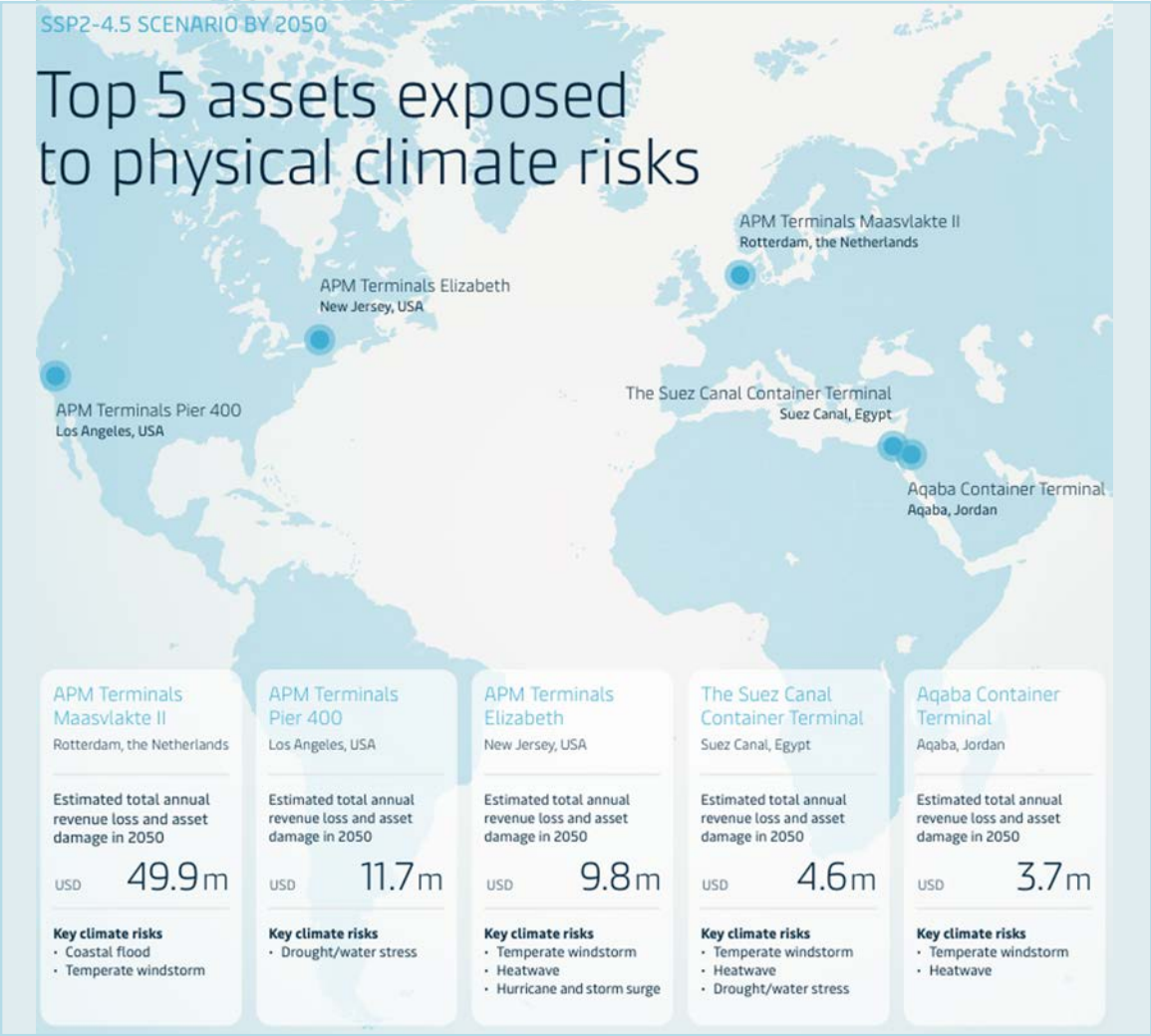
The results of the study of physical risks at onshore sites are presented below. Today, the Company's refineries and petrochemical plants are relatively more at risk from climate change than assets in other sectors, due to their general dependence on water resources in water-stressed areas (refer to point 5.2.3) and their greater vulnerability to flooding (as in the case of the Refining-Chemicals sites in North America, including the Port-Arthur site, for which mitigation measures have been put in place (refer to point 5.2.1.2.B Action 8). For most of the assets studied, TotalEnergies has identified limited potential evolution of physical risks linked to climate change between now and 2050.

### Onshore portfolio exposure to climate-related physical risks (scenario SSP5-8.5(5)) - based on the most prevalent risk

**Results of the evaluation conducted in 2024 for TotalEnergies' onshore assets. Bubble size is proportional to net book value.**



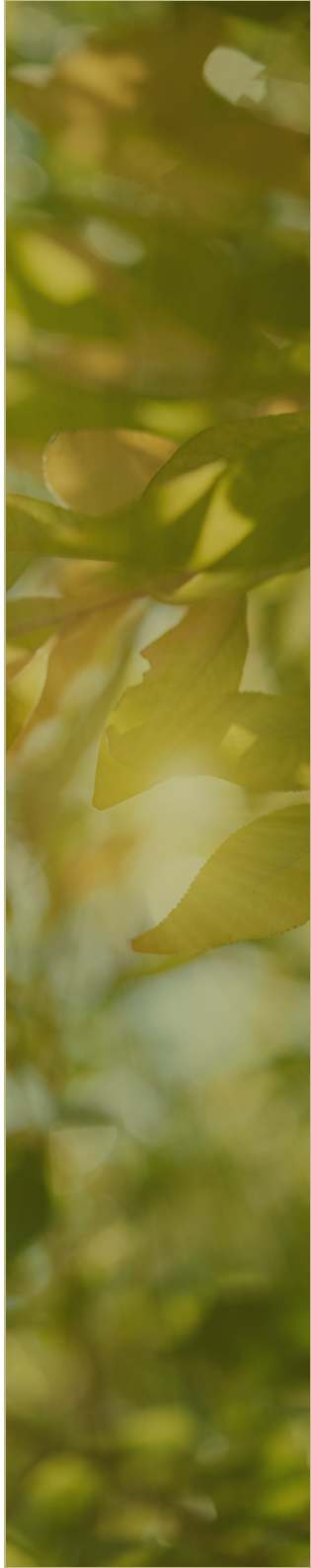
Maersk (p. 88) has also considered a range of physical risks to several of its terminals that may be affected. Notably, they have monetized the potential impacts on annual revenue and asset damage in 2050—one of the few examples of monetized climate risk reporting.



In contrast to most real economy companies—who often do not quantify or monetize physical climate risks—we see significantly more monetization efforts from financial institutions. Here are a few examples. The first is from BBVA (p. 100), where they assess their exposure to physical risks by sector.

**INDICATORS OF POTENTIAL PHYSICAL RISK LINKED TO CLIMATE CHANGE: EXPOSURES SUBJECT TO PHYSICAL RISK (MILLIONS OF EUROS)**

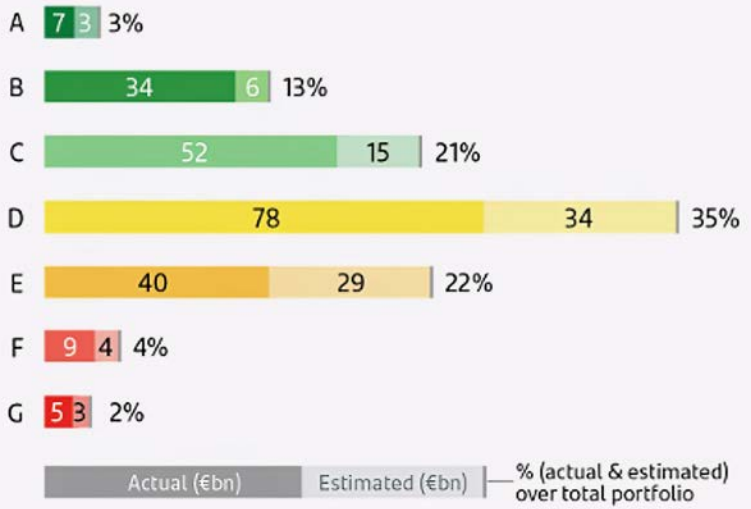
| | Gross carrying amount | a) Chronic Risk | b) Acute Risk | c) Chronic and acute | Total subject to physical risks |
|---|---|---|---|---|---|
| A - Agriculture, livestock, forestry and fishing | 5,104 | 505 | 1,293 | 695 | 2,493 |
| B - Extractive industries | 4,420 | 335 | 1,059 | 383 | 1,778 |
| C - Manufacturing industry | 56,795 | 5,070 | 2,056 | 1,909 | 9,035 |
| D - Supply of electricity, gas, steam and air conditioning | 18,759 | 1,978 | 4,546 | 276 | 6,800 |
| E- Water supply; sanitation, waste management and decontamination activities | 1,272 | — | 12 | — | 12 |
| F - Construction | 11,235 | 26 | 814 | 28 | 868 |
| G - Wholesale and retail trade; repair of motor vehicles and motorcycles | 38,159 | 15 | 395 | 14 | 424 |
| H - Transport and storage | 13,069 | 5 | 74 | 33 | 112 |
| L - Real estate activities | 11,507 | 202 | 977 | 81 | 1,261 |
| Loans secured by residential real estate | 97,034 | 456 | 10,065 | 199 | 10,720 |
| Loans secured by commercial real estate | 30,553 | 1,234 | 3,252 | 730 | 5,216 |
| Recovered collateral | 820 | 43 | 39 | 2 | 84 |
| I - Accommodation and catering activities | 9,520 | 2,960 | 1,342 | 801 | 5,103 |
| J - Information and communication | 14,625 | — | 6 | — | 6 |
| K - Financial and insurance activities | 3,417 | — | 8 | — | 9 |
| Other sectors | 17,005 | 110 | 260 | 15 | 384 |



The next one is from Santander (p. 50,54) – notice also the conclusion.

**Distribution of exposure to residential and commercial real estate portfolios by EPC (December 2024):**

Distribution based on Portfolio with EPC information. (RAG according EPC Standards)




According to the assumptions described, our exposure to material physical risks is EUR 54 billion as of December 2024, which accounts less than a 3% over Group's total assets.

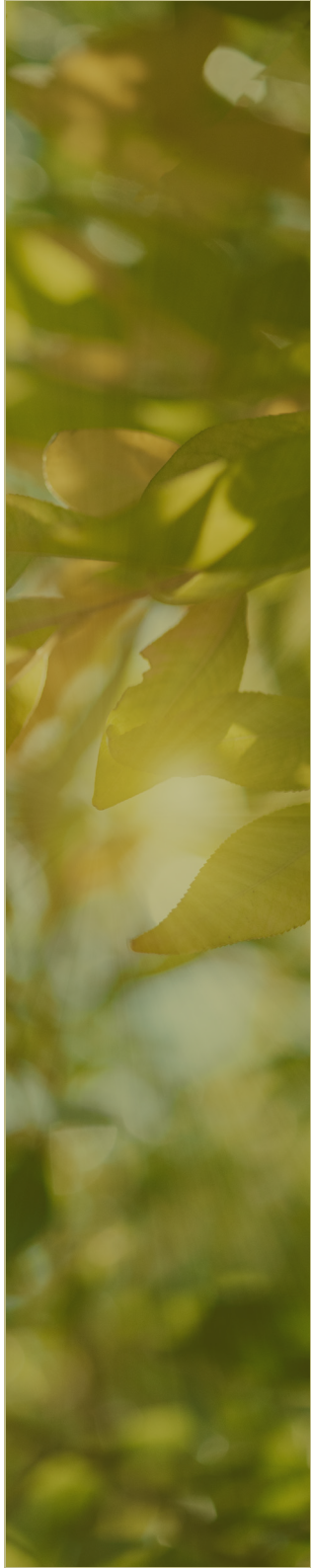
| EUR bn | Chronic | Acute | Both | Total |
|---|---|---|---|---|
| Total | 29 | 20 | 5 | 54 |

The final examples are from the insurance company Hannover Re (p. 88), which reports both the actual losses it incurred from catastrophes in 2024 and its exposure to future catastrophic events.

**Catastrophe losses and major claims [1] in 2024**

| in EUR million | Date | Gross | Net |
|---|---|---|---|
| Hurricane Milton / USA | 7–10 October 2024 | 596.1 | 230.0 |
| Baltimore's Bridge / USA | 26 March 2024 | 314.7 | 102.6 |
| Flood Southeastern Europe | 12–16 September 2024 | 206.4 | 193.9 |
| Hurricane Helene / USA | 24–29 September 2024 | 188.9 | 116.2 |
| Hailstorm Calgary / Canada | 5–6 August 2024 | 152.1 | 87.8 |
| Flood Dubai | 14–17 April 2024 | 141.2 | 138.0 |
| Riots New Caledonia | 13 May –6 June 2024 | 130.3 | 116.8 |
| 7 Man-made losses | | 112.7 | 108.8 |
| Hurricane Beryl / USA | 29 June–9 July 2024 | 93.9 | 73.7 |
| Hurricane Debby / USA | 5–11 August 2024 | 90.7 | 50.1 |
| Floods Brazil | 28 April–15 May 2024 | 85.4 | 85.3 |
| Flood Southern Germany | 31 May–6 June 2024 | 78.5 | 52.8 |
| Typhoon Yagi / Vietnam, China | 1–7 September 2024 | 38.4 | 38.4 |
| Storms, Flood / USA | 25 April–2 May 2024 | 37.2 | 33.7 |
| Earthquake Taiwan | 3 April 2024 | 36.5 | 36.5 |
| Wildfire Jasper / Canada | 22 July–17 August 2024 | 35.1 | 25.0 |
| Thunderstorms USA | 15–21 May 2024 | 35.0 | 27.9 |
| Flood Spain | 27 October –16 November 2024 | 27.9 | 27.9 |
| 2 Aviation losses | | 27.1 | 26.5 |
| Earthquake Japan | 2 January 2024 | 25.3 | 22.3 |
| Storm Frieda / West Europe | 10–13 July 2024 | 15.0 | 7.8 |
| Thunderstorms USA | 6–10 May 2024 | 14.3 | 8.9 |
| Wildfires Chile | 2–11 February 2024 | 12.4 | 7.6 |
| 1 Credit loss | | 10.7 | 10.7 |
| **Total** | | **2,505.8** | **1,629.2** |

[1] Natural catastrophes and other major claims in excess of EUR 10 million gross



**Stress tests for natural catastrophes after retrocessions (effect on forecast net income)**

| Aggregate annual loss in EUR million | 2023 | 2024 |
|---|---|---|
| **Hurricane US** | | |
| 100-year loss | -1,426 | -1,854 |
| 250-year loss | -1,946 | -2,510 |
| **Earthquake US West Coast** | | |
| 100-year loss | -782 | -1,030 |
| 250-year loss | -1,425 | -1,900 |
| **Winter storm Europe** | | |
| 100-year loss | -823 | -988 |
| 250-year loss | -1,185 | -1,467 |
| **Earthquake Japan** | | |
| 100-year loss | -609 | -820 |
| 250-year loss | -978 | -1,053 |
| **Earthquake Chile** | | |
| 100-year loss | -505 | -587 |
| 250-year loss | -1,345 | -1,522 |

Clearly there is a need for more monetized information about climate risks, as financial institutions—as well as investors and other stakeholders—actively use this information to make decisions. As illustrated by the example from Hannover Re, climate risks are real and come with tangible financial costs.

## Opportunity reporting

The final area within scenario testing and financial reporting is one that many companies tend to avoid: reporting on opportunities. Investors and other stakeholders are clearly very interested in this forward-looking information, as it can help them form opinions about the future value of a company. However, it is equally understandable why many companies are hesitant to disclose such information—due to competitive concerns, the need to secure cost-effective contracts, and traditional principles of financial prudence.

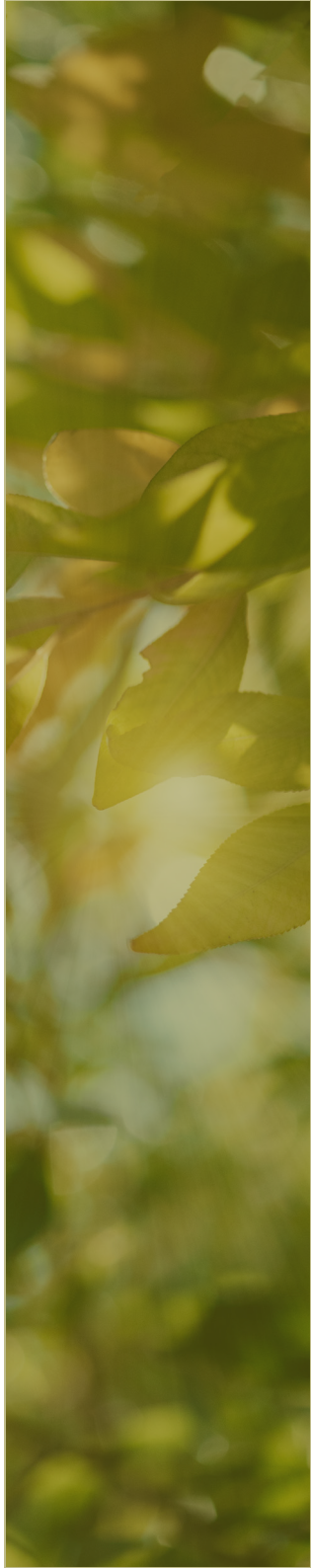
Despite this, we have identified a few examples that may serve as inspiration for others. The first comes from Schneider Electric (p. 156), where they explore the opportunities arising from climate change.

> In the short term, the Group anticipates that its markets will experience outsized growth in the next 3 years driven by electrification and digitalization.
>
> In medium- and long-term time horizons, under the most likely climate pathways, Current Policy and Stated Policy, and without considering any additional climate mitigation action, the expected aggregated impact from transition climate-related risks to Schneider Electric's discounted cash flows over the next ten years is between 3% and 4%.

Another example is this one from Naturgy (p 427), where they explain the transition risks and opportunities they see:

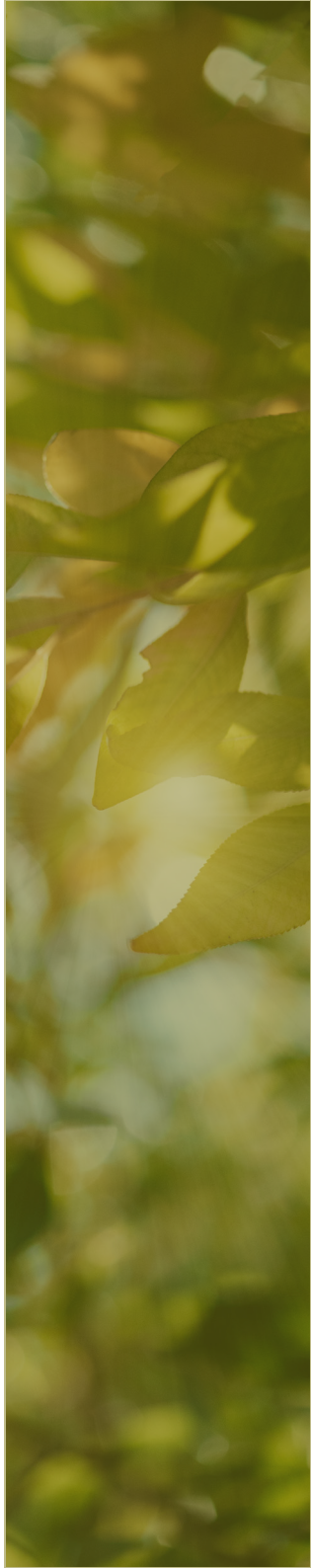
| | | | Impact evaluation | | |
|---|---|---|---|---|---|
| **Classification** | **Type of risk/opportunity** | Time horizon relevance | NZE scenario | APS scenario | STEPS scenario |
| **Transition risks** | Natural gas displacement due to climate policies and regulations (taxes, emissions trading systems, carbon pricing). | Medium/Large | ■ | ■ | ■ |
| | Market risk affecting thermal power generation | Short/Medium | ■ | ■ | ■ |
| | Litigation and sanctions related to alleged liability of the company or sector for climate change effects. | Short/Medium | ■ | ■ | No impact |
| **Transition opportunities** | Regulatory impulse for the development of biomethane and green hydrogen. | Medium/Large | ■ | ■ | ■ |
| | Regulatory impulse for the improvement of electricity grids through their digitalisation. | Medium/Large | ■ | ■ | ■ |
| | Regulatory impulse for the development of renewable electricity generation projects. | All | ■ | ■ | ■ |
| | Regulatory impulse of new business models and services based on energy efficiency, distributed generation, sale of decarbonised energy, etc. | Medium/Large | ■ | ■ | ■ |

Risk: high ( ■ ), medium ( ■ ), low ( ■ ).
Opportunity: high ( ■ ), medium ( ■ ), low ( ■ ).
Time horizons: short 2030, medium 2040, long 2050.



Air Liquide (p. 311) has also provided an overview of both risks and opportunities, and for each factor, they have also included qualitative indications of the expected impact.

| Risk factors [a] | Importance | Risk assessment | Opportunity assessment |
|---|---|---|---|
| | | **Political and legal** | |
| $CO_2$ emission price increase | Higher cost due to $CO_2$ price | Low – potential costs are subject to contractual pass-through provisions. | High – growth potential in the low-carbon emission manufacturing industry. |
| Mandates/regulations on existing products and processes | Mandates on low carbon $H_2$ and CCUS [b] regulation | Moderate – IEA scenario alignment and positive regulatory signs. | High – accelerated scale-up of emerging value chains/potential for cost differential reductions. |
| Strengthened reporting requirements | Cost of an improved reporting process, cost of transparency for reputation | Low – high-precision reporting validated by external auditors and enhanced disclosures under the Corporate Sustainability Reporting Directive (CSRD). | Moderate – improved knowledge and management of climate measures thanks to the requirements of the CSRD. |
| | | **Technology** | |
| Substitution of existing products with lower-emissions alternatives | Low-carbon industrial gas production | Low – Air Liquide is positioned as a leader in the low-carbon $H_2$ value chain, as well as on all new low-carbon industrial gas technologies. No substitute products required for air gases. | High – opportunities increase related to low-carbon hydrogen and industrial gases demand. |
| Unsuccessful investment in new technologies | Inability to develop new technologies on time, at cost and in line with market demand | Low – technologies development with robust technological roadmaps, with a long track record of success. | High – strong competitive advantage in technology development, with reduced time-to-market and a large technologies proprietaries portfolio. |
| Costs of transition to lower-emissions technology | Cost of electricity, CCUS [b] or low-carbon sourcing | Low – reduction costs lower than implied $CO_2$ price in price trajectories in 1.5 °C scenarios. | |
| | | **Markets** | |
| Change of customer behavior | Customers likely to disappear or who do not need industrial gases for their work | Low – Air Liquide has a diversified customer base, due diligence for projects evaluation (site, customer), a resilient contractual structure and customer proximity to anticipate changes. | High – potential for increased sales of industrial gases and services to meet new demand. |
| Uncertainty in the market signals | Uncertainty on $H_2$, CCS and electricity prices (for PPAs [c]) outlook | Moderate – risks on the energy price are reflected in the contracts, market signals are monitored, with a strong proximity to customers. Advocacy ensures that market signals are coming in clear and stable regulatory frameworks. | |
| Increased cost of raw materials | Increased cost of raw materials | Low – relatively low consumption of critical materials. | |
| | | **Reputation** | |
| Changes in consumer preferences | Changes in the demand of end products of value chains of the Group | Low – industrial gases are involved in almost all manufacturing processes. | High – sharp increase in industrial use of gas in all geographies and all decarbonization trajectories |



The final opportunity example comes from Dassault (p. 97), which also reports the monetized value of opportunities across various time horizons—a very rare practice.

### iv) Results of the Transition Opportunities and Risks Assessment

*In its End Markets*

On the basis of an in-depth analysis carried out in 2023, Dassault Systèmes evaluates the opportunities related to the transition as greater than the risks from this same transition. This is, in particular, the result of the analyses initiated for the industries mentioned above (see the above paragraph "Process for identifying and assessing transition opportunities and risks" above), which are already engaged in transforming their business models. With its virtual twin solutions on the **3D**EXPERIENCE platform, Dassault Systèmes supports its major customers as well as new customers in integrating the challenges of Climate transition and Circularity efforts into the design of their products and services. This is most notable in the Transportation & Mobility, Aerospace & Defense, High-Tech, Industrial Equipment, and Architecture, Engineering & Construction industries.

The potential financial impact of the net risks and opportunities associated with the Company's end-market transition risk is estimated at an additional net opportunity of approximately:

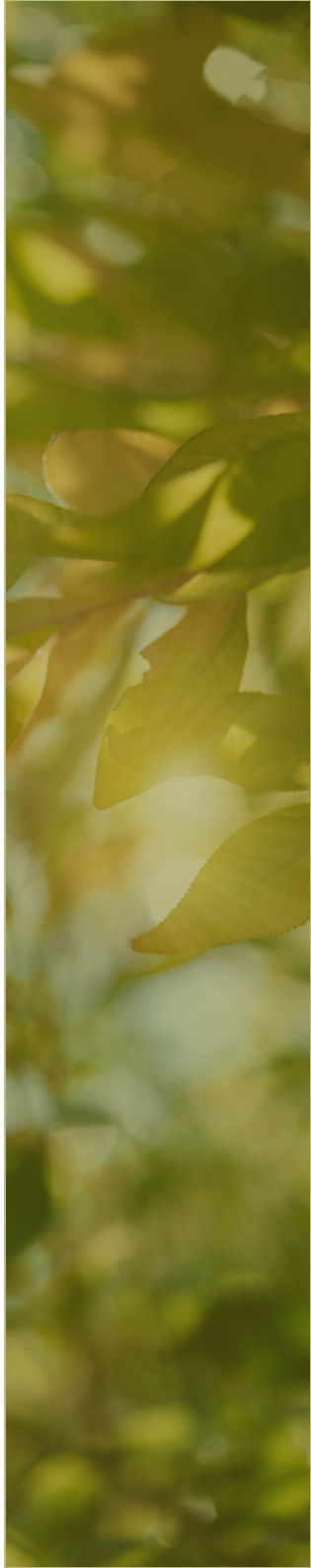
| Horizon | 2022 | 2030 | 2040 | 2050 |
|---|---|---|---|---|
| Opportunities (net of risks) *(in millions of euros)* | Reference year | +600 | +1,200 | +2,000 |

If you are interested in how your company can improve financial reporting related to climate-related risks, we recommend a 2024 guideline from WBCSD. It provides a step-by-step guide, lists of potential risks and opportunities to consider, and—importantly—includes calculation pathway examples and references to relevant IFRS standards:

Climate-related financial impact guide – supporting business assessment and disclosure

Another useful resource on this topic—particularly for investors—is the guide from the Cambridge Institute for Sustainability Leadership (CISL):

Investing in Tomorrow: A Guide to Building Climate-Resilient Investment Portfolios | Cambridge Institute for Sustainability Leadership (CISL)



# EU TAXONOMY

The EU Green Taxonomy is a classification system that defines which of a company's activities are considered 'green'.
The intention is to make it easier for financial institutions to direct capital toward green companies and projects, while minimizing the risk of greenwashing. The disclosure requirements within the taxonomy differ between non-financial and financial undertakings and have been phased in since 2021. The 2024 reporting year marked the first time taxonomy reporting was required to follow as attachment to the CSRD reporting within the financial report. It also became mandatory for the taxonomy reporting to be limited assured, just like the CSRD report.

Since taxonomy reporting is now a mandated attachment of the CSRD report, we have chosen to include it in this report on the CSRD climate disclosures. Furthermore, the taxonomy aligns well with the environmental objectives outlined in the CSRD E-standards – yet it remains a distinct reporting framework.

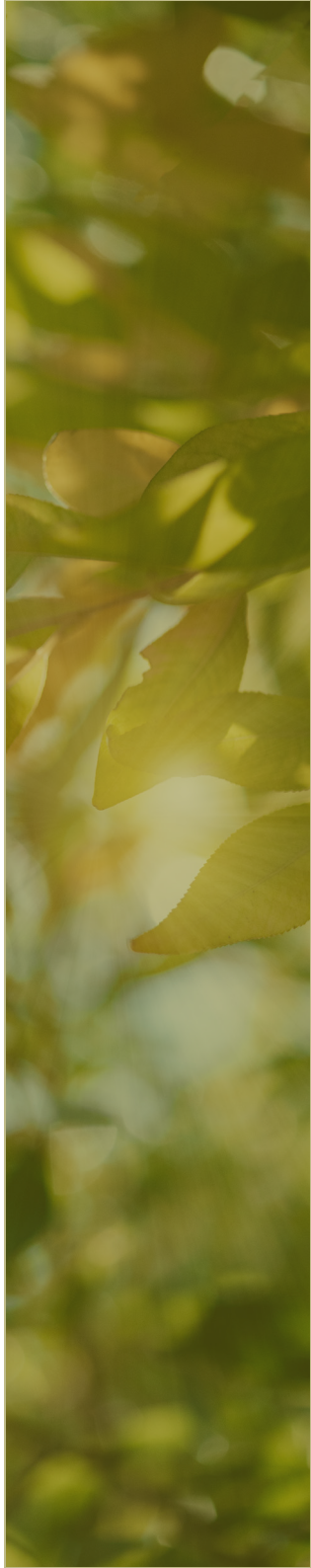
Two years ago, we published a white paper[11] on taxonomy reporting practice by the 100 largest listed companies at the time. This allows us to now assess progress – or the lack thereof – with some clarity. At that time, we made the following recommendations to companies to improve their taxonomy reporting:

- Use the mandatory tabular formats – even if no activities are eligible.
- Reconcile taxonomy reporting with the consolidated financial reporting.
- Use the official Delegated Act codes – do not create your own activity codes.
- Improve the description of accounting principles – including any thresholds applied.

Have companies improved their taxonomy reporting?
Yes – absolutely. All companies now use the mandatory tabular formats,[12] even when they have no eligible activities (and regardless that most companies also find them overly complex – but see the companies' suggestions for simplifications later in this chapter). Additionally, none of the companies create their own activity codes anymore, as some did two years ago – this is a significant improvement.

Progress is more mixed when it comes to providing specific reconciliations with financial reporting, and not least, offering detailed descriptions of the accounting principles used to identify a company's activities.

Approximately three-quarters[13] of non-financial companies appear to use segment-based (IFRS 8 Operating segments, which align with the newly suggested materiality threshold proposed by the Platform,[14] but are not part of current legislation) or product-based reporting to identify their turnover-related activities. Of these, one-third simply apply the same segmentation for their CapEx reporting (capital expenditure), while the remaining two-thirds add "assets' nature" as an additional layer on top of the turnover-based principles. "Assets' nature" is a concept we described two years ago, where we observed that companies identified individual assets within their CapEx and presented them as individual "activities" in the CapEx note—for example, solar panels on top of a company's headquarters or newly purchased electric company cars.



Given the lack of precise regulation, there is no definitive right or wrong way to allocate activities. In fact, it may be a sound approach to single out individual assets as activities within CapEx reporting, as this can potentially enable companies to raise green capital through green loans or bonds for their capital expenditures. That was the original purpose of the taxonomy: to direct capital toward green solutions.

However, the above also suggests that one-quarter of companies use entirely different principles. We particularly see this among French and, to some extent, Spanish companies, which report on a very high number of activities—sometimes 30 or more—while a typical company usually reports only 3 to 7 activities. We understand that some of these companies apply principles from IFRS 15 (Revenue from Contracts with Customers) when preparing their turnover breakdown, as suggested in a FAQ from 2023[15] that is not part of the official regulation. However, it often remains unclear what principle many of these companies actually apply to identify all these activities, some of which are so minor that they account for just 0.0% of turnover. This makes taxonomy reporting difficult to compare across companies and challenging to interpret. It also raises questions about the aggregated turnover and CapEx figures presented by financial institutions—are they comparing apples and oranges? Probably.

Regarding assurance of taxonomy reporting, we also observe issues involving both companies and their auditors. As for the CSRD reporting, we sometimes see boundary-issues for the taxonomy reporting - but in this context, no such ambiguity should exist.[16] Only financial boundaries are permitted. This means, for example, that pro-rata consolidated joint operations (under IFRS 11) must be included as they are in financial reporting, whereas equity-consolidated entities must not be included. This is sometimes not followed through. We wonder, if that happens when the Taxonomy reporting is not made in collaboration with the financial department.

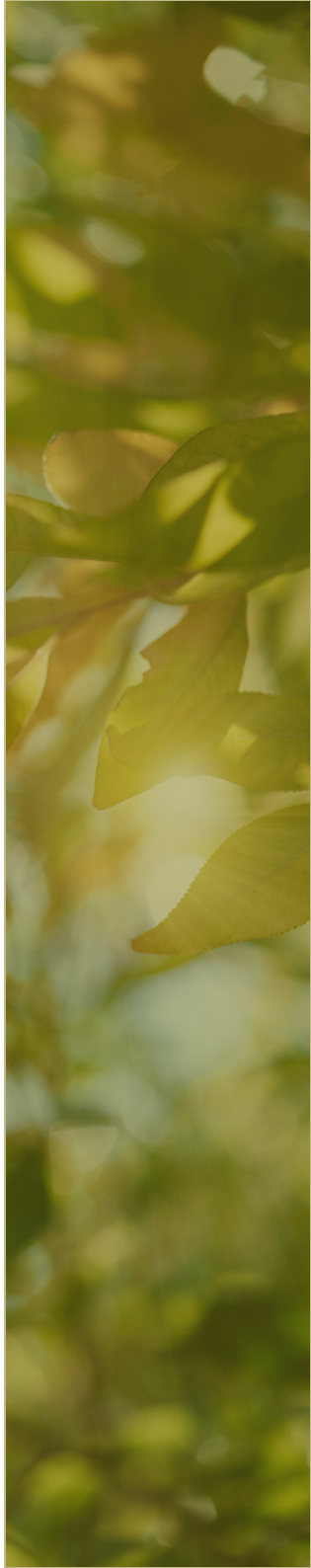
We also occasionally see very limited eligibility reporting—what some might call underreporting. There are cases of companies within the same sector and industry where one has no trouble identifying eligible activities, while another cannot identify any. This is where both companies and auditors need to consider the users of the data: eligibility reporting exists to help investors and other stakeholders identify opportunities to "greenify" the company—uncovering potential and hidden gems. That's what taxonomy reporting can support. Therefore, the primary test direction should be completeness for eligibility reporting. Alignment reporting, on the other hand, should be thoroughly checked for validity to combat greenwashing.

In the following, we highlight a few interesting examples of reporting to inspire further improvements. The first example comes from Heineken (p. 201), which provides an effective reconciliation of their CapEx, including specific references to notes in the financial report.

*CapEx*

For CapEx, the total denominator was equal to all additions to tangible and intangible assets during the financial year. This included purchased property, plant, and equipment (PP&E); additions to right-of-use assets (ROU); and purchased intangible assets. Additionally, it encompassed additions to tangible and intangible assets resulting from business combinations. See the table below for the total CapEx as included in the denominator of the CapEx KPI, along with references to the consolidated financial statements.

| In millions of € | 2024 | Reference to consolidated financial statements |
|---|---|---|
| Purchased owned PP&E | 2,322 | Note 8.2 |
| Additions to ROU assets | 478 | Note 8.2 |
| Purchased intangible assets | 281 | Note 8.1 |
| **Total CapEx** | **3,081** | |



The next example is from Orange (p. 414), which has also provided a detailed reconciliation of its CapEx. Note how the company distinguishes between which line items within the CapEx notes that should be used for the reconciliation.

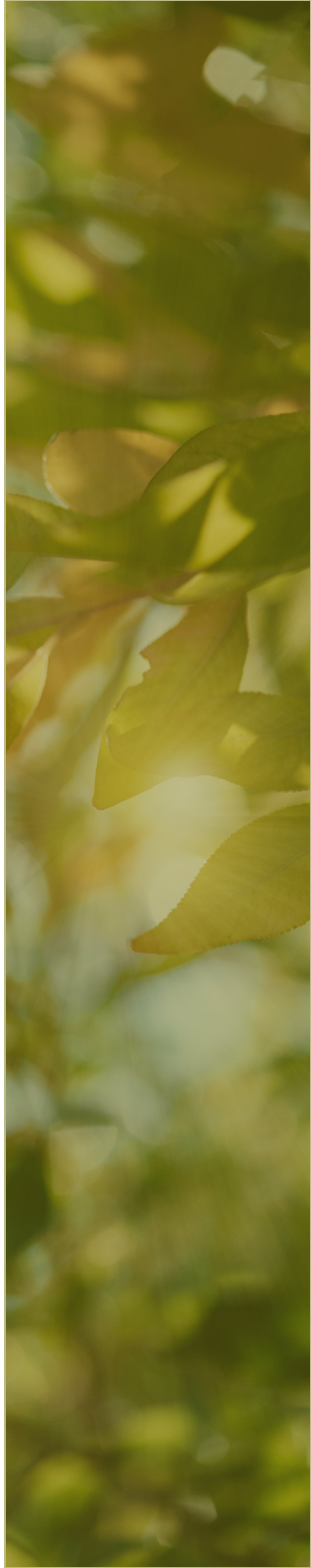
**Reconciliation of property, plant and equipment, intangible assets and right-of-use assets to taxonomy CAPEX**

| (in millions of euros) | 2024 |
|---|---|
| **Net book value of property, plant and equipment, intangible assets and right-of-use assets – in the opening balance** | **56,467** |
| **Deduction of items excluded from the taxonomy definition** | **(14,336)** |
| Disposals and retirements | (154) |
| Exits from the scope of consolidation (1) | (6,634) |
| Depreciation and amortization | (8,097) |
| Impairment losses | (62) |
| Impact of changes in the assessments | 671 |
| Translation adjustments | (117) |
| Reclassification and other items | 57 |
| **Items to be included in CAPEX under the taxonomy definition** | **7,843** |
| Increase in intangible assets, property, plant and equipment and new right-of-use assets | 7,792 |
| Entries into the scope of consolidation | 50 |
| **Net book value of property, plant and equipment, intangible assets and right-of-use assets – in the closing balance** | **49,974** |

(1) Of which, primarily, the loss of exclusive control of Orange Espagne and its subsidiaries on March 26, 2024, resulting in the disposal of the associated fixed assets and right-of-use assets.

The next examples relate to accounting principles. The first example is from Deutsche Post (p. 83), which openly explains the challenges they faced in allocating their activities. As a result, they decided to use allocation keys.

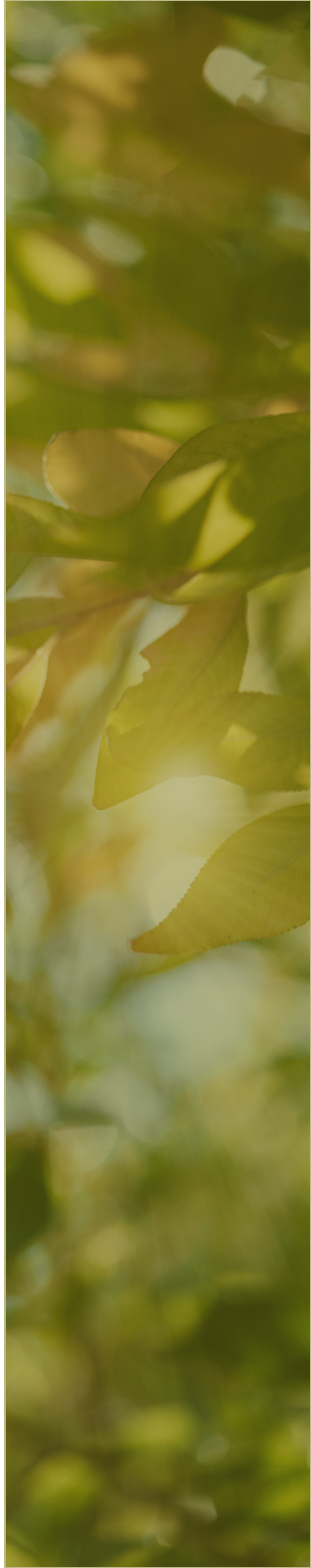
> Because our products and services generally comprise more than one economic activity, it is not usually possible to allocate the associated revenue or opex directly to the assets that have been identified as aligned. In such cases, we apply specific allocation keys to be able to allocate the taxonomy-aligned amounts to the corresponding taxonomy activity. Examples of these allocation keys are the ratio of taxonomy-aligned e-vehicles to the total fleet (revenue) or the ratio of taxonomy-aligned surface area to the total surface area of mail and parcel centers (revenue and opex).



Michelin (p. 259) has created a very detailed activity identification overview, outlining how each activity contributes to the various taxonomy objectives and which KPIs they report against.

| European Taxonomy | | Corresponding Michelin Group activity | Substantial contribution to one of the environmental objectives | | | Reported KPIs | | |
|---|---|---|---|---|---|---|---|---|
| **Economic activity** | **Description** | **Activity** | **Mitigation** | **Adaptation** | **Circular economy** | **Net sales** | **CapEx** | **OpEx** |
| **3.6 Manufacture of other low-carbon technologies** | Manufacture of technologies aimed at substantial GHG emission reductions | Passenger car, Light truck and Truck tire manufacturing | X | X | | X | X<br>X[1] | |
| **8.2 Data-driven solutions for GHG emission reductions** | Development or use of ICT solutions that are aimed at collecting, transmitting and storing data and at its modeling and use where those activities are predominantly aimed at the provision of data and analytics enabling GHG emission reductions | Development of fleet management telematics solutions to improve fleet fuel efficiency | X | | | X | X | |
| **5.1 Repair, refurbishment and remanufacturing** | Repair, refurbishment and remanufacturing of goods that have been used for their intended purpose before by a customer | Truck tire retreading (replacing worn tread with new tread) | | | X | X | X | |
| **7.2 Renovation of existing buildings** | Construction and civil engineering works or preparation thereof | Renovation of head office buildings | X | X | | | X[1] | |

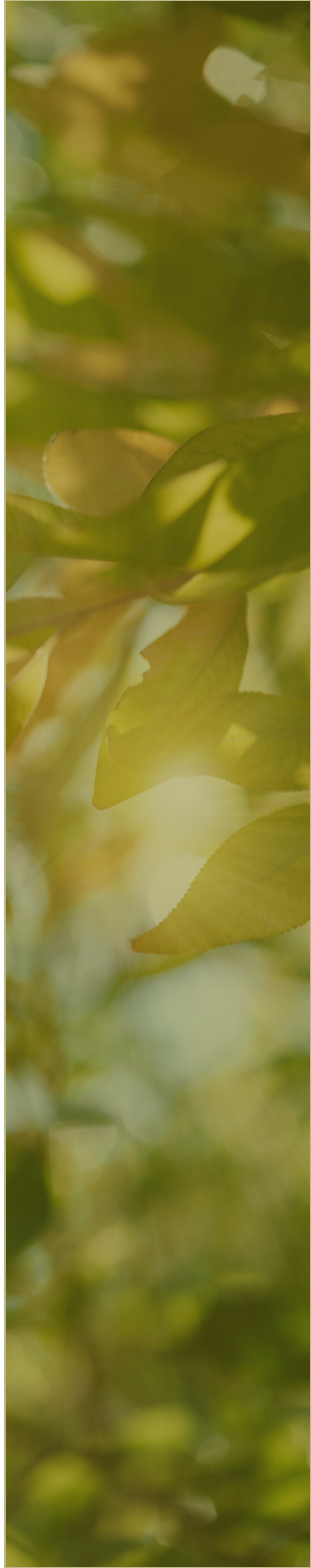
**(1)** This activity is immaterial and therefore has not been included in the figures in Appendix C.



Rheinmetall (p. 109) has provided the following overview, indicating which taxonomy activities are related to which subsidiaries. Notice also, they focus on what their products are being used for.

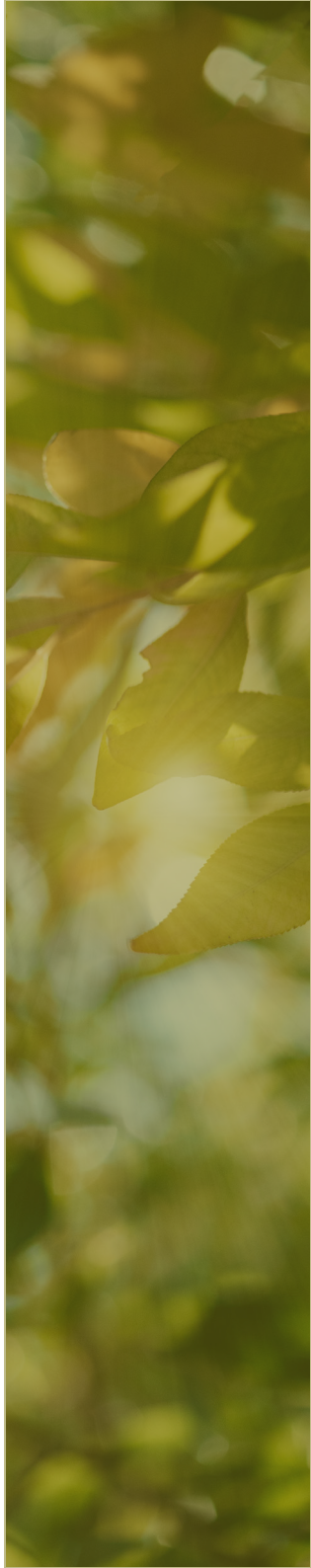
**2.1 Identified criteria sets relevant for sales**

| Categories | Description of the activity | Affected companies |
|---|---|---|
| **Environmental objective 1: Climate change mitigation** | | |
| 3.1. Manufacture of renewable energy technologies | Manufacture of renewable energy technologies, where renewable energy is defined in Article 2(1) of Directive (EU) 2018/2001. | Pierburg GmbH<br>KS Gleitlager GmbH<br>Rheinmetall Invent GmbH |
| 3.3. Manufacture of low carbon technologies for transport | Manufacture, repair, maintenance, retrofitting, repurposing and upgrade of low carbon transport vehicles, rolling stock and vessels. | Rheinmetall MAN Military Vehicles GmbH |
| 3.5. Manufacture of energy efficient equipment for buildings | Manufacture of energy efficient equipment for buildings. | Rheinmetall Invent GmbH<br>Pierburg GmbH |
| 3.6. Manufacture of other low carbon technologies. | Manufacture of technologies aimed at substantial GHG emission reductions in other sectors of the economy, where those technologies are not covered in Sections 3.1 to 3.5 of this Annex. | Rheinmetall Electronics GmbH |
| 3.18. Manufacture of automotive and mobility components | Manufacture of mobility components for zero-emission personal mobility devices and of automotive and mobility systems and components. | Pierburg GmbH<br>Pierburg Pump Technology GmbH |
| 3.21. Manufacture of aircraft | Manufacture of aircraft and aircraft components and equipment. | Rheinmetall Aviation Services GmbH |
| 7.1. Construction of new buildings | Development of building projects for residential and non-residential buildings by bringing together financial, technical and physical means to realize the building projects for later sale as well as the construction of complete residential or non-residential buildings, on own account for sale or on a fee or contract basis. | Rheinmetall Immobilien GmbH |
| 7.7. Acquisition and ownership of buildings | Buying real estate and exercising ownership of that real estate. | Rheinmetall Immobilien GmbH and associated project companies |
| **Environmental objective 4: Circular economy** | | |
| 5.3 Preparation for reuse of end-of-life products and product components | Preparation for the reuse of products and components at the end of their service life. | MS Motorservice France S.A.S. |



VW (p. 349) has created an overview attempting to align taxonomy activities to its products or line of business - not all make such a specific note to document the identification.

| Economic activity in accordance with the EU Taxonomy | Description of economic activity | Allocation in the Volkswagen Group |
|---|---|---|
| **Environmental objective: Climate change mitigation** | | |
| **3. Manufacturing** | | |
| 3.2 Manufacture of equipment for the production and use of hydrogen | Manufacture of equipment for the production and use of hydrogen. | Power Engineering |
| 3.3 Manufacture of low-carbon technologies for transport | Manufacture, repair, maintenance, retrofitting, repurposing and upgrade of low-carbon vehicles, rolling stock and vessels. | Vehicle-related business |
| 3.6 Manufacture of other low-carbon technologies | Manufacture of technologies aimed at substantial greenhouse gas emission reductions in other sectors of the economy, where those technologies do not fall under other economic activities in the manufacturing sector. | Power Engineering |
| 3.18 Manufacture of automotive and mobility components | Manufacture, repair, maintenance, retrofitting, repurposing and upgrade of automotive and mobility systems and components that are essential for delivering and improving the environmental performance of the vehicle. | Vehicle-related business |
| **9. Professional, scientific and technical activities** | | |
| 9.1 Close to market research, development and innovation | Research, applied research and experimental development of solutions, processes, technologies, business models and other products dedicated to the reduction, avoidance or removal of greenhouse gas emissions for which the ability to reduce, remove or avoid greenhouse gas emissions in the target economic activities has at least been demonstrated in a relevant environment, corresponding to at least Technology Readiness Level 6. | Power Engineering |

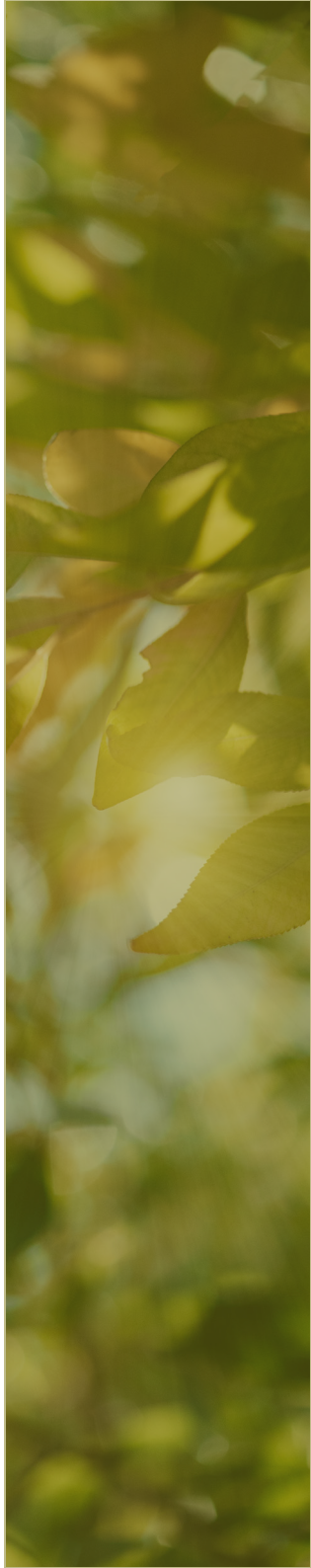


The next examples will show interesting creative minds within the companies. From our dialogues with companies and investors, we know that the mandatory tabular formats are often difficult for the report readers/users to understand. As a result, many companies provide "simplified versions" to help users grasp the outcome of the taxonomy classification. Perhaps regulators could take inspiration from these company examples to reduce complexity.

The first example of a simplified taxonomy overview is from Danone (p. 253), which simply provides the totals for eligibility and alignment in terms of turnover and CapEx, along with comparison data – simple and effective.

**Summary of eligible and aligned activities**

| *(in € millions except percentage)* | 2024 | | 2023 | |
|---|---|---|---|---|
| | **Turnover KPI** | **CapEx KPI** | **Turnover KPI** | **CapEx KPI** |
| **Eligibility** | | | | |
| Numerator | 69 | 191 | 62 | 154 |
| Denominator | 27376 | 1173 | 27,619 | 1,017 |
| Eligibility rate | 0.3% | 16.3% | 0.2% | 15.1% |
| **Alignment** | | | | |
| Numerator | - | 5 | - | - |
| Denominator | 27376 | 1173 | 27,619 | 1,017 |
| Alignment rate | -% | 0,4% | -% | -% |

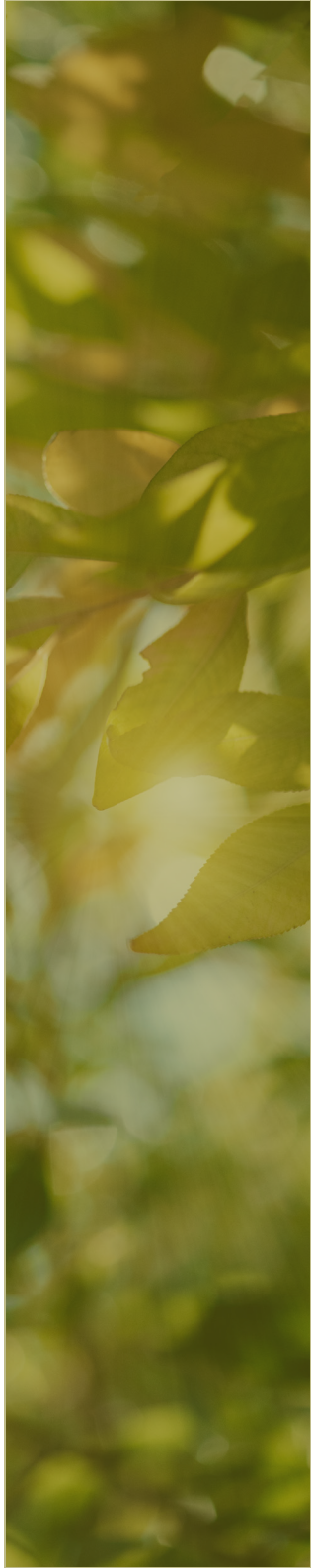


Another example of simplified taxonomy reporting comes from VW (p. 355), which presents a straightforward explanation of the evaluation of each activity's eligibility and alignment, just as it works as the reconciliation – a relatively simple but very effective note.

## SALES REVENUE 2024

| | SALES REVENUE | | SUBSTANTIAL CONTRIBUTION TO CLIMATE CHANGE MITIGATION | | COMPLI-ANCE WITH DNSH CRITERIA | COMPLI-ANCE WITH MINIMUM SAFE-GUARDS | TAXONOMY-ALIGNED SALES REVENUE | |
|---|---|---|---|---|---|---|---|---|
| Economic activities | € million | %[1] | € million | %[1] | Y/N | Y/N | € million | %[1] |
| **A. Taxonomy-eligible activities** | **296,215** | **91.2** | **38,627** | **11.9** | **Y/N** | **Y** | **24,104** | **7.4** |
| **Vehicle-related business** | | | | | | | | |
| 3.3 Manufacture of low-carbon technologies for transport | 292,685 | 90.2 | 38,309 | 11.8 | Y/N | Y | 24,104 | 7.4 |
| 3.18 Manufacture of automotive and mobility components | 182 | 0.1 | 182 | 0.1 | N | Y | - | - |
| **Power Engineering** | | | | | | | | |
| 3.2 Manufacture of equipment for the production and use of hydrogen | 34 | 0.0 | 34 | 0.0 | N | Y | - | - |
| 3.6 Manufacture of other low-carbon technologies | 3,237 | 1.0 | 102 | 0.0 | N | Y | - | - |
| 9.1 Close to market research, development and innovation | 76 | 0.0 | - | - | - | - | - | - |
| **B. Taxonomy-non-eligible activities** | **28,441** | **8.8** | | | | | | |
| **Total (A + B)** | **324,656** | | | | | | | |

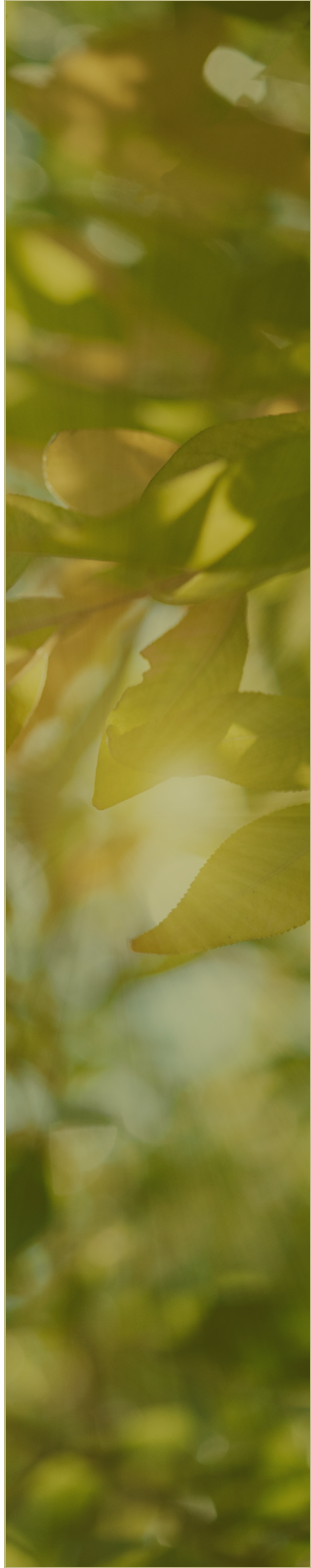
1 All percentages relate to the Group's total sales revenue.



So, the mandatory tabular forms are challenging for non-financial companies to present — but the complexity is even greater for financial companies. Their tabular forms are exceptionally complex and not user-friendly at all. Below is an example from ING (p. 385) illustrating what they look like. We must admit, for us it remains unclear who the intended users of these complex forms are, how they are expected to use them, or why such a high level of complexity is necessary.

**1. Assets for the calculation of GAR based on Turnover**

| | Million EUR | Disclosure reference date T | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total (gross) carrying amount | Climate Change Mitigation (CCM) | | | | | Climate Change Adaptation (CCA) | | | | Water and marine resources (WTR) | | | | Circular economy (CE) | | | | Pollution (PPC) | | | | Biodiversity and Ecosystems (BIO) | | | | TOTAL (CCM + CCA + WTR + CE + PPC + BIO) | | | | |
| | | | Of which towards taxonomy relevant sectors (Taxonomy-eligible) | | | | | Of which towards taxonomy relevant sectors (Taxonomy-eligible) | | | | Of which towards taxonomy relevant sectors (Taxonomy-eligible) | | | | Of which towards taxonomy relevant sectors (Taxonomy-eligible) | | | | Of which towards taxonomy relevant sectors (Taxonomy-eligible) | | | | Of which towards taxonomy relevant sectors (Taxonomy-eligible) | | | | | | | | |
| | | | | Of which environmentally sustainable (Taxonomy-aligned) | | | | | Of which environmentally sustainable (Taxonomy-aligned) | | | | Of which environmentally sustainable (Taxonomy-aligned) | | | | Of which environmentally sustainable (Taxonomy-aligned) | | | | Of which environmentally sustainable (Taxonomy-aligned) | | | | Of which environmentally sustainable (Taxonomy-aligned) | | | | | Of which environmentally sustainable (Taxonomy-aligned) | | | |
| | | | | | Of which Use of Proceeds | Of which transi-tional | Of which enabling | | | Of which Use of Proceeds | Of which enabling | | | Of which Use of Proceeds | Of which enabling | | | Of which Use of Proceeds | Of which enabling | | | Of which Use of Proceeds | Of which enabling | | | Of which Use of Proceeds | Of which enabling | | | Of which Use of Proceeds | Of which transi-tional | Of which enabling |
| | **GAR - Covered assets in both numerator and denominator** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Loans and advances, debt securities and equity instruments not HfT eligible for GAR calculation | 401,996 | 364,943 | 57,511 | 55,195 | 549 | 1,055 | 1,361 | 106 | | 27 | 54 | 6 | | 5 | 1,425 | 8 | | 2 | 171 | 1 | | | 58 | | | | 368,011 | 57,633 | 55,195 | 549 | 1,089 |
| 2 | **Financial undertakings** | **28,340** | **7,423** | **462** | | **78** | **142** | **235** | **46** | | **2** | | | | | **128** | | | | **33** | | | | | | | | **7,818** | **508** | | **78** | **144** |
| 3 | Credit institutions | 24,490 | 6,028 | 311 | | 32 | 52 | 98 | 2 | | 1 | | | | | 1 | | | | | | | | | | | | 6,127 | 313 | | 32 | 53 |
| 4 | Loans and advances | 13,182 | 3,080 | 212 | | 27 | 48 | 70 | 1 | | | | | | | 1 | | | | | | | | | | | | 3,151 | 233 | | 27 | 48 |
| 5 | Debt securities, including UoP | 11,257 | 2,945 | 99 | | 4 | 4 | 28 | 1 | | | | | | | | | | | | | | | | | | | 2,973 | 100 | | 4 | 5 |
| 6 | Equity instruments | 51 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | | |
| 7 | Other financial corporations | 3,850 | 1,395 | 150 | | 47 | 90 | 136 | 44 | | 1 | | | | | 127 | | | | 33 | | | | | | | | 1,691 | 195 | | 47 | 91 |
| 8 | of which investment firms | 87 | 19 | | | | | | | | | | | | | | | | | | | | | | | | | 19 | | | | |
| 9 | Loans and advances | 82 | 19 | | | | | | | | | | | | | | | | | | | | | | | | | 19 | | | | |
| 10 | Debt securities, including UoP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Equity instruments | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | of which management companies | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Loans and advances | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Debt securities, including UoP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Equity instruments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | of which insurance undertakings | 73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | Loans and advances | 73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Debt securities, including UoP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Equity instruments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | **Non-financial undertakings** | **22,704** | **6,612** | **1,856** | | **470** | **913** | **1,126** | **60** | | **25** | **10** | **6** | | **5** | **1,297** | **8** | | **2** | **138** | **1** | | | **58** | | | | **9,241** | **1,930** | | **470** | **945** |
| 21 | Loans and advances | 22,608 | 6,600 | 1,850 | | 470 | 907 | 1,120 | 60 | | 25 | 10 | 6 | | 5 | 1,297 | 8 | | 2 | 138 | 1 | | | 58 | | | | 9,223 | 1,924 | | 470 | 939 |
| 22 | Debt securities, including UoP | 97 | 12 | 6 | | | 6 | 6 | | | | | | | | | | | | | | | | | | | | 18 | 6 | | | 6 |
| 23 | Equity instruments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | **Households** | **348,580** | **348,580** | **55,195** | **55,195** | | | | | | | | | | | | | | | | | | | | | | | **348,580** | **55,195** | **55,195** | | |
| 25 | of which loans collateralised by residential immovable property | **348,580** | 348,580 | 55,195 | 55,195 | | | | | | | | | | | | | | | | | | | | | | | 348,580 | 55,195 | 55,195 | | |
| 26 | of which building renovation loans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | of which motor vehicle loans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | **Local governments financing** | **2,371** | **2,328** | | | | | | | | | **43** | | | | | | | | | | | | | | | | **2,371** | | | | |
| 29 | Housing financing | 2,304 | 2,304 | | | | | | | | | | | | | | | | | | | | | | | | | 2,304 | | | | |
| 30 | Other local government financing | 67 | 24 | | | | | | | | | 43 | | | | | | | | | | | | | | | | 67 | | | | |
| 31 | **Collateral obtained by taking possession: residential and commercial immovable properties** | **2** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Assets excluded from the numerator for GAR calculation (covered in the denominator) | 435,688 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | **Financial and Non-financial undertakings** | **336,082** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | SMEs and NFCs (other than SMEs) not subject to NFRD disclosure obligations | 174,530 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | Loans and advances | 163,768 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | of which loans collateralised by commercial immovable property | 37,578 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Therefore, we will present some examples from financial companies that, in addition to the mandatory forms, also have attempted to provide user-friendly, simplified taxonomy notes. Again, perhaps regulators could take inspiration from these creative efforts to reduce complexity. The first example is from AXA (p. 195).

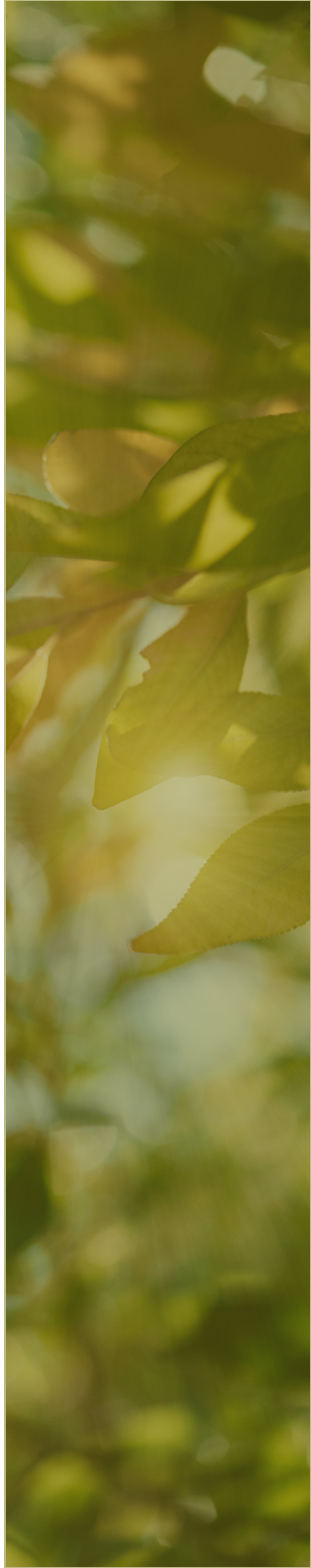
### 4.2.3.2 Investments directed at funding Taxonomy-aligned activities

**Proportion of the insurance or reinsurance undertaking's investments that are directed at funding, or are associated with, Taxonomy-aligned activities**

| | 2024 | | | | 2023 | | | |
|---|---|---|---|---|---|---|---|---|
| | Turnover-based | | Capital expenditures-based | | Turnover-based | | Capital expenditures-based | |
| *(in Euro millions, except percentages)* | % | Amount | % | Amount | % | Amount | % | Amount |
| The weighted average value of all the investments of insurance or reinsurance undertakings that are directed at funding, or are associated with Taxonomy-aligned economic activities relative to the value of total assets covered by the KPI, with following weights for investments in undertakings | 1.1% | 4,562 | 1.5% | 6,096 | 1% | 3,818 | 1.4% | 5,629 |

| | 2024 | | 2023 | |
|---|---|---|---|---|
| | % | Amount | % | Amount |
| Assets covered by the KPI relative to total investments of insurance or reinsurance undertakings (total AuM). Excluding investments in sovereign entities | 74.6% | 415,768 | 74.0% | 398,500 |

The next example is from CaixaBank (p. 322), which uses a more visual representation of taxonomy eligibility and alignment.




If you are interested in the EU Taxonomy practice and its implementation during the first year of adoption, we recommend our 2023 white paper: WMBC_EU_Green_Taxonomy.pdf

You may also be interested in a more global perspective on taxonomies – take a look at the report published by Deloitte and WBCSD in 2024: Harnessing taxonomies to help deliver sustainable development | WBCSD

# POLITICAL INFLUENCE & LOBBYING ACTIVITIES

In this report on how companies disclose various climate-related topics, it may be surprising that we have chosen also to include G1-5: Political Influence and Lobbying Activities, which is part of the governance topics. We have done so because political and lobbying activities play a significant role in companies' ability to implement climate initiatives and solutions — which may be either supported or hindered by current or future regulation.

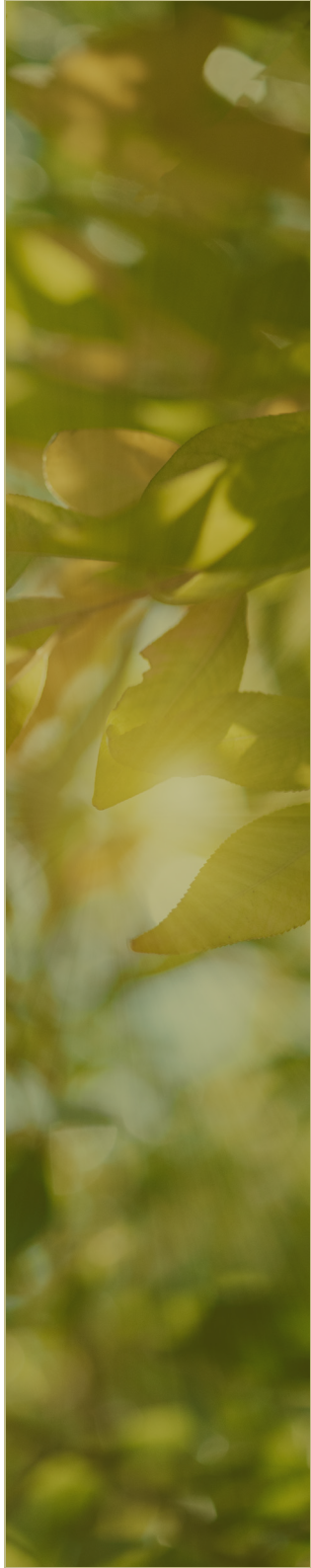
The objective of this Disclosure Requirement is to provide transparency regarding the undertaking's activities and commitments related to exerting political influence, including political contributions and the types and purposes of lobbying efforts.

For investors, this reporting element is important because it, amongst others, offers insight into how well a company's climate plans and targets align with its advocacy efforts. Even if a company does not actively engage in advocacy or chooses not to engage policymakers or the broader political ecosystem, it may still contribute indirectly through trade associations, chambers of commerce, think tanks, or other lobbying organizations to which it associates itself.

About half of the companies reviewed considered G1-5 to be material. However, only two-thirds of those provided information on the amounts donated or membership fees paid – and the omission of this part of the Application Requirement is rarely explained. Additionally, it is not always clear whether Application Requirement 12, which includes disclosing membership fees to lobbying associations, has been fully considered when reporting donation amounts. Therefore, if G1-5 is deemed material, it is not sufficient to simply state that the company does not donate to political parties — there might be other kinds of indirect donations to be considered.

| Political influence & lobbying activities | Number of companies |
|---|---|
| Does report – incl. amount of donations /membership fees | 34 |
| Does report - but not with amount of donations/membership fees | 12 |
| Does not report on this topic | 47 |
| | |
| **Total** | **93** |

The first example is from ASM (p. 60), which provides a historical overview of the advocacy initiatives the company has been associated with.



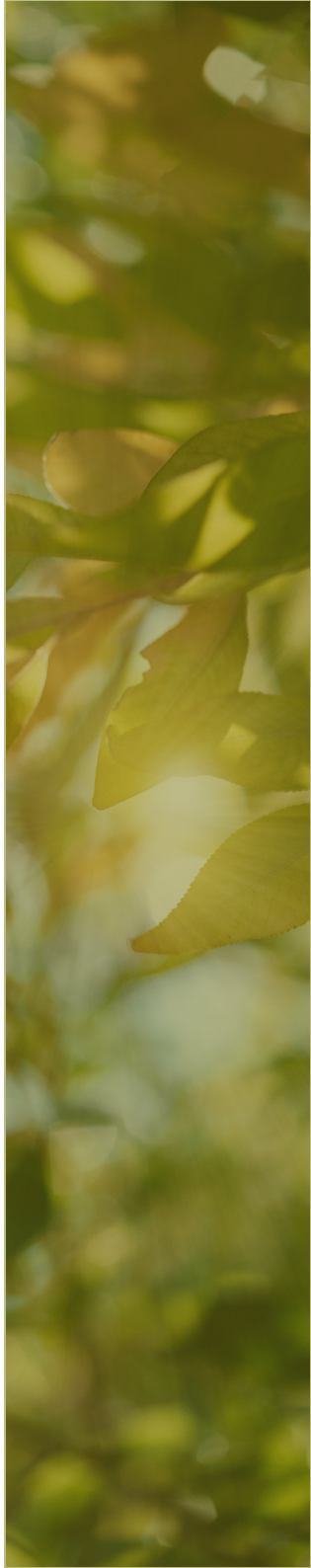

Philips (p. 242) has focused on providing an overview of the trade associations it is part of, along with the associated membership fees.

**Trade Associations**

Our memberships in trade associations are essential for staying informed about industry developments and standards. We contribute significantly to these associations to support advocacy efforts, research, and collective industry initiatives that benefit Philips and the healthcare sector. In this trade association overview, we also indicate the relevant country or geographical market area for each association, where applicable.

Philips Group
**Trade Associations**

| |
|---|
| **EUR 1,300,000 - EUR 1,000,000** |
| Advanced Medical Technology Association (AdvaMed) – United States |
| **EUR 250,000 - EUR 100,000** |
| APACMed – Asia-Pacific |
| CardioVascular Coalition (CVC) – United States |
| Dutch Employers' Federation (VNO-NCW) – Netherlands |
| Electrical and Electronic Manufacturers' Association (ZVEI) – Germany |
| European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry (COCIR) – European Union |
| Medical Device Manufacturers Association (MDMA) – United States |
| Medical Imaging & Technology Alliance (MITA) – United States |
| MedTech Europe – European Union |
| **EUR 100,000 - EUR 40,000** |
| Appliance Industry in Europe (APPLiA) – European Union |
| Coalition for Imaging and Bioengineering Research (CIBR) – United States |
| Council for Quality Respiratory Care (CQRC) – United States |
| DigitalEurope – European Union |
| European Round Table for Industry (ERT) – European Union |



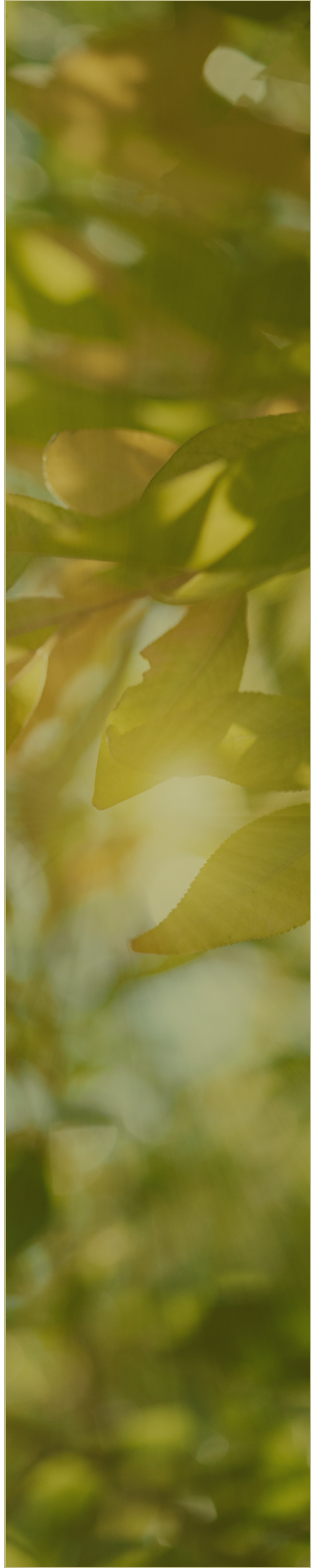
Another interesting example is from Endesa (pp. 413–414), where they also include information on the public subsidies they have received — which could, of course, indicate some level of dependence on the political environment:

| Millions of Euros | 2024 | 2023 |
|---|---|---|
| Contributions to foundations and non-profit organisations | 8.3 | 8.7 |
| Foundations | 7.2 | 7.0 |
| Public Administrations | 1.1 | 1.7 |
| Public Subsidies Received | 50.6 | 3.8 |

| **Contributions to Entities 2024** | |
|---|---|
| • Endesa Foundation, in the amount of 6 million euros. | • This is the annual donation made to the Foundation for the development and financing of its foundational activities, which are based on support for education, job training, biodiversity and culture. |
| • Universo Mujer III Programme (Public Administration), for an amount of 1.1 million euros. | • This is a donation in the framework of a programme classified as an "event of exceptional public interest" aimed at promoting and increasing women's participation in all areas of sport. |

During 2024, Endesa and its subsidiaries received non-refundable contributions in the form of direct subsidies for innovation projects amounting to Euro 50.6 million from both European and national institutions, the most significant of which are as follows:

| **Innovation Projects** | |
|---|---|
| MOVES I-II-III | • Dedicated to electric mobility. |
| ALDEAVIEJA | • Wind repowering. |
| AMBRA-E | • International project, carried out jointly with Romania and Italy, dedicated to electric mobility. |
| MATORRAL | • Hybridisation of photovoltaic park with storage. |
| NANOWINGS | • *Bio-inspired"* nano-coating for ice protection of wind turbines. |
| ARDILA | • Hybridisation of photovoltaic park with storage. |
| AVIFAUNA PRTR | • Installation of supports for the correction of power lines dangerous for birds in Catalonia. |
| PRTR DIGITISATION | • Installations or reinforcements for public access electric vehicle charging points. |



Some companies are setting targets for their interactions with other organizations, while others are considering it — see this example from Kering (p. 264):

## 4.4.3 Targets and performance indicators

### Target

Kering has not yet set a target related to positive, transparent and collaborative influence but ensures that its approach is consistent and correctly implemented by making sure there is an equal balance between both sides: professional and industry associations, and sustainability partnerships or coalitions.

### Performance indicators

In 2024, Kering and its houses allocated a total of €5,294,047 to their influence activities around the world. This does not include spending on charitable projects.

Out of this total, €3,314,944 (or 63%) went on positive influence expenditure, exclusively through actions from organizations and coalitions of which the Group is a member. While most of this amount went to The Fashion Pact and the Watch & Jewellery Initiative 2030, Kering also made the following contributions:

- €40,000 to the French non-profit Entreprises pour l'Environnement (EPE), which involves around 60 businesses in promoting economic development that is compatible with planetary boundaries and socially acceptable;
- €31,000 to Textile Exchange, which produces sustainability standards in relation to textiles to guide the choices made by companies and customers.

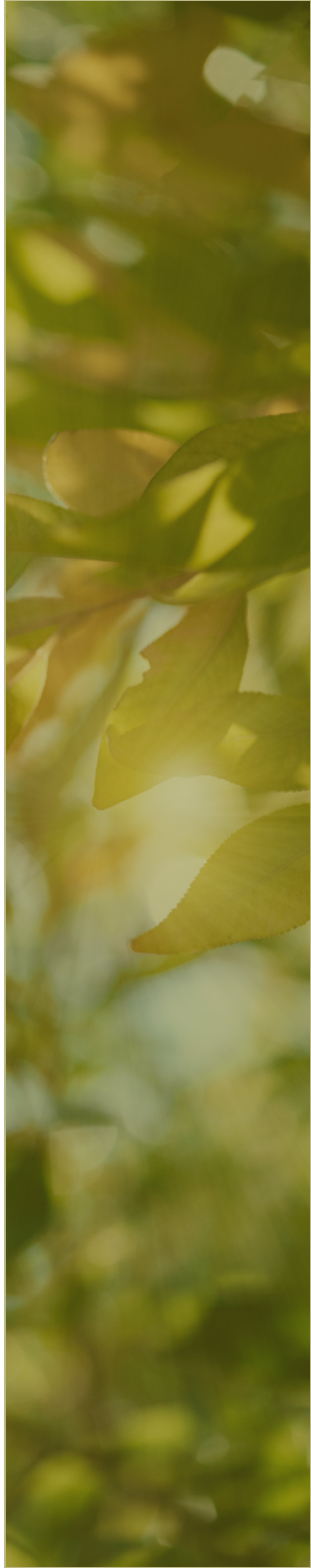
€1,979,103 (or 37%) was spent on subscriptions to professional or industry associations, including:

- €388,000 to *Camera Nazionale della Moda Italiana*, which supports the development of the Italian fashion industry;
- €252,037 to the *Comité Colbert*, which defends the specificities of the luxury sector in France and Europe;
- €126,646 to *Confindustria*, which represents Italian companies and helps drive their exports.

In line with Kering's Code of Ethics, no contributions (financial or in kind) were made in 2024 in the name or on behalf of the Group to any political organizations in exchange for any direct or indirect material, commercial or personal advantage. In 2024, no members of Kering's Board of Directors held a position of public office during the two years preceding their appointment (see chapter 3, section 2.1).

The amount allocated to influence activities during the year breaks down as follows:

| In euros | 2024 |
|---|---|
| Contributions to sustainability partnerships or coalitions | €3,314,944 |
| Contributions to professional or industry associations | €1,979,103 |
| Contributions (financial or in kind) to political organizations | €0 |
| TOTAL | €5,294,047 |



Novo Nordisk (p. 93) takes a similar approach — but presents the outcomes quite differently, with a greater focus on the effectiveness of the advocacy efforts they are involved in.

To ensure transparency around our activities, we are registered in the EU Transparency Register under ID 29570313329-11. No members of our Board of Directors have held a comparable position in public administration in the two years preceding their appointment.

**Actions**

Through our engagement with various stakeholders, such as industry and trade associations, we have taken actions for the implementation of our objectives, with the key objectives listed in following the table. Unless otherwise indicated, actions are considered recurring.

**Performance**

In 2024, a new metric on trade association membership fees was introduced. A zero-tolerance policy applies at Novo Nordisk with regards to in-kind political contributions.

| 4.1.7 Trade association membership fees and in-kind political contributions | Unit | 2024 | 2023 | 2022 |
|---|---|---|---|---|
| Trade association membership fees | mDKK | 177 | - | - |
| In-kind political contributions made | mDKK | 0 | - | - |

**ACCOUNTING POLICIES**

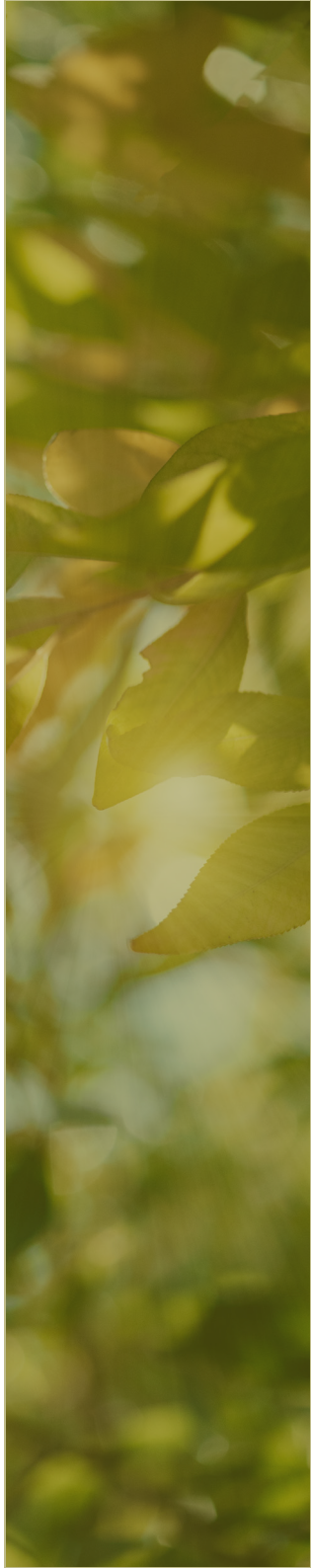
*Trade association membership fees*

The total monetary value of trade association membership fees during the financial year reported in DKK millions. Data is collected at country level for Brazil, Canada, China, Denmark, France, Germany, India, Italy, Japan, the United Kingdom and the US, where Novo Nordisk focuses its public affairs activities.

*In-kind political contributions*

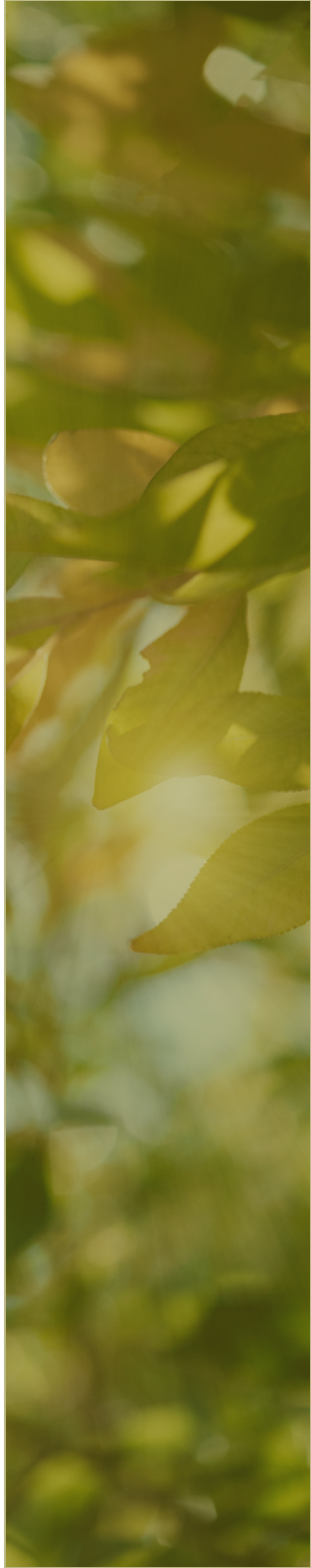
In-kind contributions can include advertising, use of facilities, design and printing, donation of equipment, provision of board membership, employment or consultancy work for elected politicians or candidates for office.

| Key actions to address advocacy | Description and year of completion | Scope of action | Target in place | Overall progress in 2024 and how we track effectiveness |
|---|---|---|---|---|
| *Presidency of the European Federation of Pharmaceutical Industries and Associations (EFPIA)* | Novo Nordisk's President and CEO Lars Fruergaard Jørgensen is President of EFPIA 2023-2025, focusing on the review of the EU General Pharmaceutical Legislation, advocating for innovation and providing optimal conditions for making new discoveries accessible to patients. | Patients in Europe | No | • Our CEO's presidency of EFPIA supported the collaboration with policy makers, to establish industrial policies aimed at fostering an ecosystem that encourages innovation and prioritises life sciences as a strategic industry. |
| *Obesity advocacy* | Advocacy through EFPIA Obesity Policy Platform to improve healthcare solutions for people living with obesity, recognise obesity as a relapsing chronic disease and increase knowledge of its financial cost. Recurring collaboration with EFPIA Health Systems Working Group, to address some of the major challenges facing health system resilience. | Patients in Europe | No | • In 2024, Novo Nordisk joined the newly established Obesity Policy Platform.<br>• The Health Systems Working Group has made progress on improving efficiencies between health system resources and fostering collaboration on creating more sustainable health systems. |
| *Diabetes advocacy* | Advocacy through the European Diabetes Forum for policy change that enables healthcare systems to better manage diabetes care. | Patients in Europe | No | • Campaigned, together with the European cardiovascular community, for cardiovascular disease and diabetes within European policy priorities. |



Evidently, reporting on political influence and lobbying activities is still an emerging reporting topic and varies significantly across companies. Historically a limited number of companies have been active in championing climate policy. While companies are working to cut emissions, they may be undermining their own efforts by not advocating for climate policy or inadvertently allowing their trade groups to lobby against climate policy. To support more consistency, we developed the Responsible Policy Engagement (RPE) Framework, which provides guidance and tools to help companies align their climate goals with their advocacy activities, both direct and indirect.

- Additional insights into corporate advocacy reporting can be found in a recent analysis of a random set of CSRD reports, which highlights common themes, especially around reporting on advocacy-related investments. Read our latest blog here.
- To further support companies, we released a Corporate Advocacy Template to assist in developing dedicated climate policy engagement reports. See more here: WMBC-Corporate-Advocacy-Template.pdf.



# CLIMATE INCENTIVES

In this last chapter on climate reporting, we have chosen to focus on climate incentives. As part of climate reporting, companies are also required to clarify the extent to which incentives for the board and executives include climate-related components — see GOV-3: Integration of Sustainability-Related Performance in Incentive Schemes. The generic GOV-3 is not subject to a materiality assessment (DMA); it is mandatory — see also ESRS 2.

In practice, GOV-3 reporting is often included in a separate Remuneration Report, which is typically incorporated into the CSRD report by reference. This is fully allowed under ESRS 2, Application Requirement 7.

For investors and other stakeholders, it is clearly important to understand to what extent a company's executives are incentivized to prioritize the climate agenda — even if climate is not a key concern for the investor or stakeholder. It is ultimately about assessing whether there is alignment of priorities.

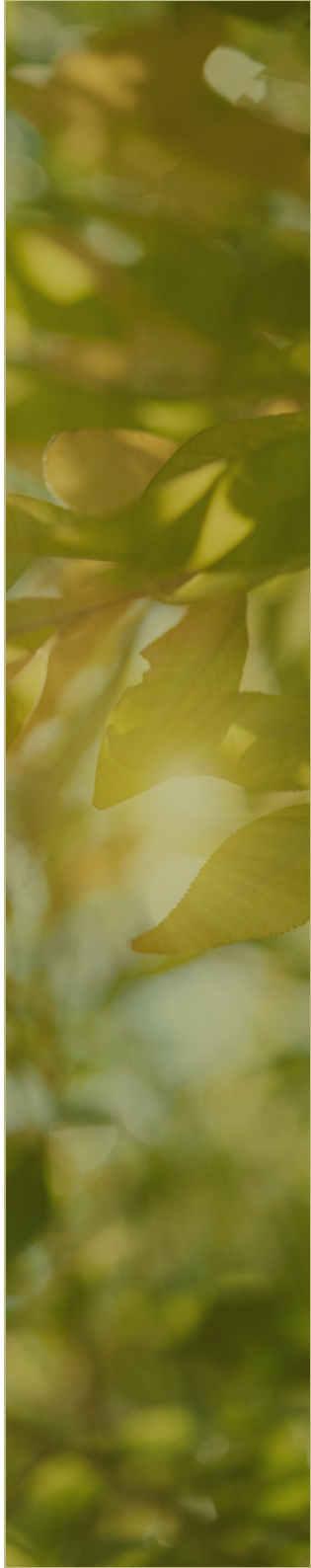
Most incentive schemes among large, listed companies include sustainability elements — only six do not. Of those that include sustainability, most also incorporate climate as a specific component. Only five companies clearly do not cover climate, while 12 are vague, making it unclear how much of the scheme is climate-related. This leaves us with 70 companies where climate is clearly identified as part of the incentive structure.

The first example is from Maersk (p. 7 of the Remuneration Report), where they explain the topics included in the incentive scheme, the metrics considered, and the weighting of each.

**Table 4** Performance measures for 2024-2027 long-term incentive plan[1]

| Value driver | Performance measures | Sub Metric | Explanation | Weighting |
|---|---|---|---|---|
| Financial performance | Return on invested capital (ROIC) | • Ocean ROIC<br>• Logistics & Services ROIC<br>• Terminals ROIC | ROIC is a key performance indicator that assess how well the company generates long-term returns from its invested capital. | 80% |
| Non-financial performance | Environment, Social and Government (ESG)[2] | • Decarbonisation - EEOI (Energy Efficiency Operational Indicator)<br>• Decarbonisation - Green offerings Ocean<br>• DEI - % of women in leadership<br>• DEI - Diversity in teams<br>• Safety - LTIF (Lost Time Incident Frequency)<br>• Safety - Near misses in Logistics & Services (Recorded high potential incidents) | The ESG performance is based on three of our ESG categories – Decarbonisation, DEI & Safety. | 20% |
| **Total** | | | | **100%** |

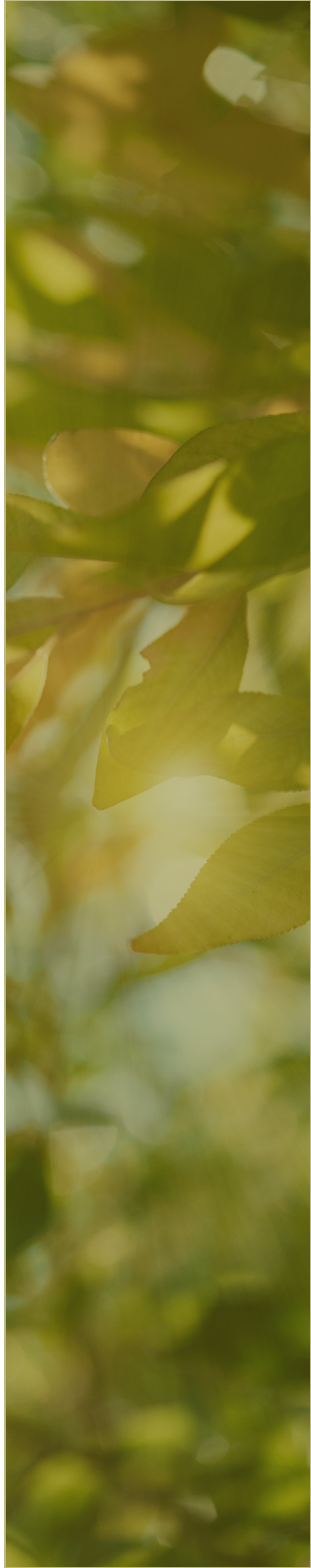
1 Grants are issued in April, and performance follows the financial year (calendar year).
2 GOV-3 §29b and §29d



Crédit Agricole (p. 52) provides details for each senior manager receiving incentives.

GRANT CRITERIA APPLICABLE TO THE ANNUAL VARIABLE COMPENSATION FOR THE YEAR 2024

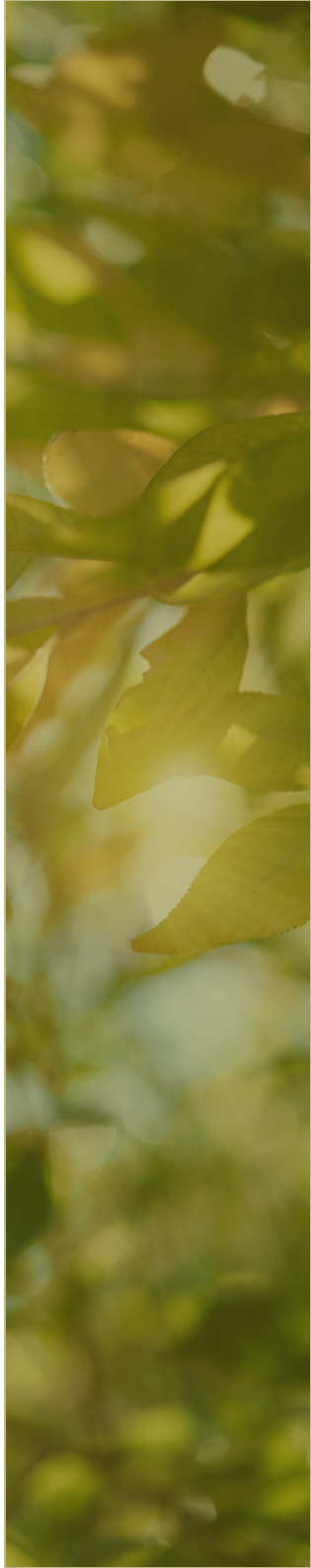
| | | | Philippe Brassac, Chief Executive Officer | Olivier Gavalda, Deputy Chief Executive Officer | Jérôme Grivet, Deputy Chief Executive Officer | Xavier Musca, Deputy Chief Executive Officer |
|---|---|---|---|---|---|---|
| Financial criteria (60%) | Scope – Crédit Agricole S.A. | Net income Group share – Cost/income ratio, excl. SRF – Return on tangible equity (equally weighted) | 60% | 30% | 60% | 30% |
| | Large Customers division | Net income Group share – Cost/income ratio, excl. SRF – Risk-weighted assets (equally weighted) | - | - | - | 30% |
| | Universal Banking division | Net income Group share – Cost/income ratio, excl. SRF – Risk-weighted assets (equally weighted) | - | 30% | - | - |
| Non-financial CSR criteria (20%) | Societal CSR (10%) | Promote the inclusion of young people through employment and training (number of young people welcomed into the Crédit Agricole Group per year) | 5% | 5% | 5% | 5% |
| | | Collective dynamics (new Accountability index) | 5% | 5% | 5% | 5% |
| | Environmental CSR (10%) | 80% growth in Crédit Agricole CIB's exposure to low-carbon energy by 2025 | 4% | 4% | 4% | 4% |
| | | Increase the production capacity of renewable energy facilities that the CAA helps to finance to 14 GW by 2025 | 3% | 3% | 3% | 3% |
| | | Improve the carbon footprint of Crédit Agricole S.A. | 3% | 3% | 3% | 3% |
| Other non-financial criteria (20%) | Customer Project | | 8% | 7% | 5% | 5% |
| | Digital and technological transformation | | 5% | 7% | 5% | 5% |
| | Risk and compliance management | | 7% | 6% | 10% | 10% |



The next example is from DSV (p. 6 of the Remuneration Report), which includes information about the success criteria — specifically, when performance is considered sufficient to result in a grant. This is clearly important for users to evaluate whether the targets are ambitious enough.

**2025 performance-based grant (based on 2024 performance)**

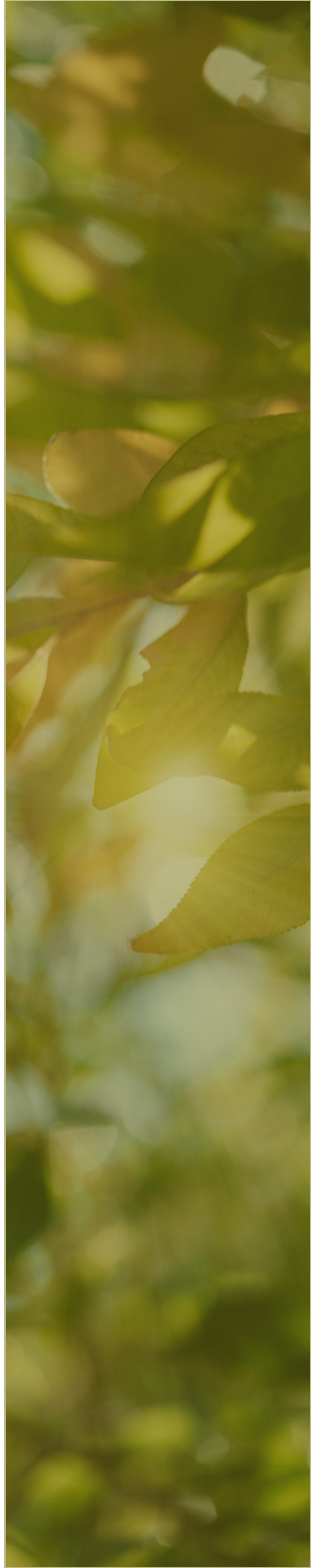
| Target | Weight | Grant range | 2024 Performance conditions |
|---|---|---|---|
| EBIT | 40% | +/- 8% | EBIT before special items is more than +/- 5% above/below the average 2024 Outlook published in the 2023 Annual Report. |
| Share price | 40% | +/- 8% | Full-year development in the DSV share price is more than +/- 5%-points above/below the development in a defined peer group share index (Kuehne+Nagel, Expeditors International). |
| Sustainability | 20% | +/- 4% | Total GHG scope 1 and 2 reduction target of 4% in 2024 compared to baseline year and additional GHG scope 3 reduction initiatives, including development of supplier engagement strategies and development and operationalisation of Book & Claim processes to push and incentivise electric- and bio-fuel usage by hauliers. |
| **Total** | **100%** | **+/- 20%** | |



Kering (p. 139) has structured its scheme using scales, allowing targets to be met to varying degrees.

Accordingly, the number of performance shares awarded to the Chairman and Chief Executive Officer that ultimately vest is determined according to achievement of the following targets:

| Criteria | Performance assessment method | Relative weighting |
|---|---|---|
| **Consolidated recurring operating income**[(1)] | Increase observed between the average amount over the three-year vesting period (2025, 2026, and 2027) and the amount observed for the year preceding the year of the grant (2024)<br>• No increase: 0 shares<br>• Increase of less than 5%: 50% of the shares relating to the criterion<br>• Increase of 5% or more: 100% of the shares relating to the criterion | 40% |
| **Consolidated free cash flow from operations**[(1)] | Increase observed between the average amount over the three-year vesting period (2025, 2026, and 2027) and the amount observed for the year preceding the year of the grant (2024)<br>• No increase: 0 shares<br>• Increase of less than 5%: 50% of the shares relating to the criterion<br>• Increase of 5% or more: 100% of the shares relating to the criterion | 40% |
| **Proportion of women in executive management roles** | Proportion of women in Top 500 roles at 50% after the end of the vesting period<br>• Representation rate of women less than 40%: 0 shares<br>• Representation rate of women at least 40% but less than 45%: 50% of the shares relating to the criterion<br>• Representation rate of women at least 45% but less than 50%: 80% of the shares relating to the criterion<br>• Representation rate of women at least 50%: 100% of the shares relating to the criterion | 10% |
| **Biodiversity** | By 2027, in line with the targets validated by the SBTN (Science Based Targets Network), set in motion collaborative restoration and water, land and biodiversity regeneration programs in three priority drainage basins for Kering's activities<br>• One program set up: 0 shares<br>• Two programs set up: 50% of the shares relating to the criterion<br>• Three programs set up: 100% of the shares relating to the criterion | 5% |
| **Climate** | 12% reduction by 2027 in greenhouse gas emissions in absolute terms (scopes 1, 2 and 3 of the GHG Protocol) as part of the SBTi (Science Based Targets Initiative) verified target of net zero emissions by 2050<br>• Reduction of less than 5%: 0 shares<br>• Reduction of at least 5% but less than 12%: 50% of the shares relating to the criterion<br>• Reduction of at least 12%: 100% of the shares relating to the criterion | 5% |

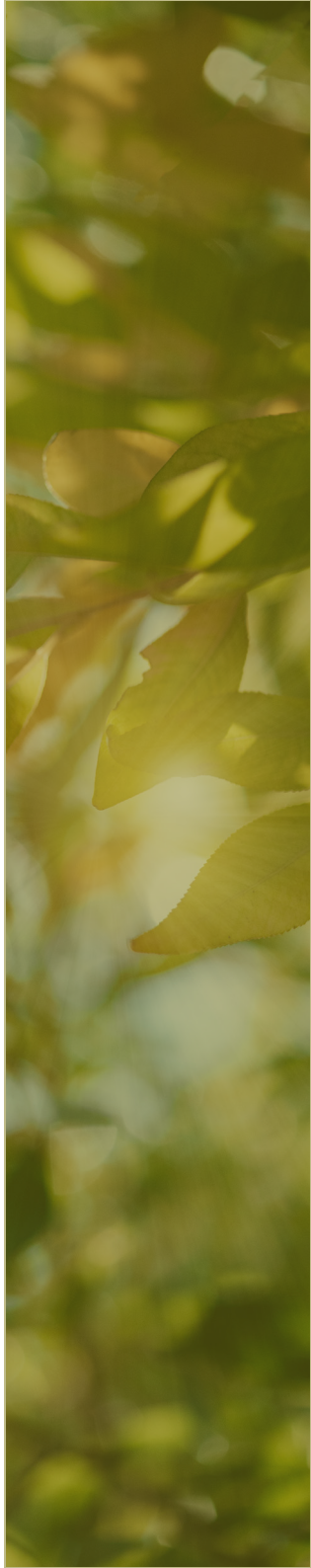


Finally, in this detailed overview from Philips (p. 80), note how they include the targets, the metrics used to measure those targets, the target ranges, and the performance evaluation.

| Sustainability category | Underlying objective | Target range | Realized performance | |
|---|---|---|---|---|
| Ensure healthy lives and promote well-being for all at all ages (SDG3) Lives Improved | Targeted # of Lives Improved in year 3 [1] | 1.75 – 1.91 million | 1.96 million | Better than target range |
| Ensure sustainable consumption and production patterns (SDG12) Circularity | Targeted circular revenue in year 3 [2] | 16.0% – 21.0% | 24.4% | Better than target range |
| | Targeted waste to landfill in year 3 [3] | 3.5% – 0.1% | <0.01% | Better than target range |
| | Targeted closing the loop in year 3 [4] | 28.0% – 36.0% | 19.5% | Below target range |
| Take urgent action to combat climate change and its impacts (SDG13) Carbon footprint | Targeted $CO_2$ -equivalent (in kilotonnes) in year 3 | 612 – 549 kilotonnes $CO_2$ | 474 kilotonnes $CO_2$ | Better than target range |

1 Lives Improved by Philips products, solutions and services and care to those in underserved markets.
2 Revenue from products, services and solutions contributing to circularity (e.g. optimizing and re-using materials)
3 Avoiding production of waste materials.
4 Taking back healthcare equipment.

As shown, incentive reporting is still immature and often lacks comparability. This is also due to cultural differences — some countries have a long-standing tradition of disclosing detailed remuneration information, while others do not. If you're interested in how to incorporate climate-related elements into incentive structures, consider reviewing this guideline from the Climate Governance Initiative, which is affiliated with the World Economic Forum (WEF):
Executive Compensation Guidebook for Climate Transition: 2023 Addendum | Climate Governance Initiative



# FINAL REMARKS

This report shows significant developments taking place in in companies' climate reporting practices during the 2024 reporting year. It also demonstrates the importance of regulation and assurance, especially in contrast to voluntary reporting frameworks – but also shows that companies still use creative solutions to meet their users' needs.

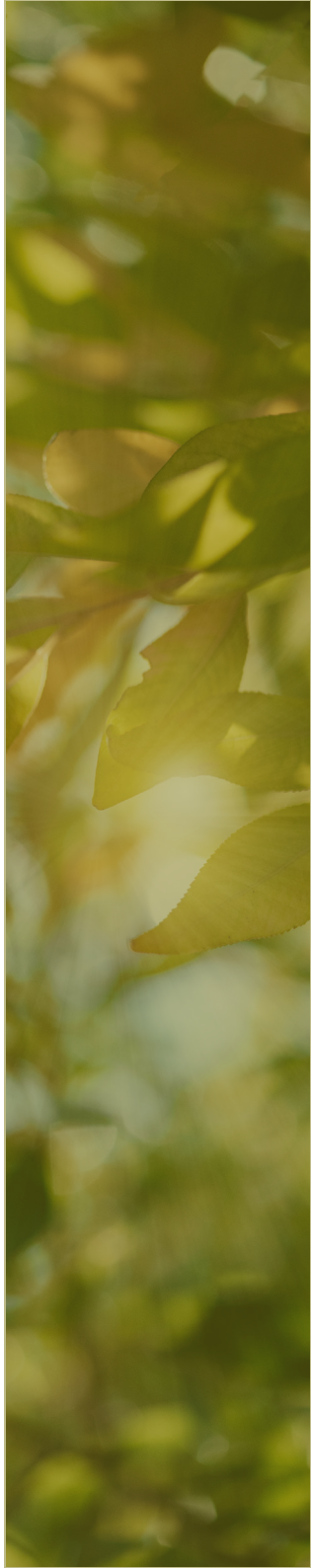
We observe that 9 out of 10 companies are either restating or erasing their historical comparison data. We see this as a positive development, suggesting that regulation and assurance lead to more credible and comparable data that is therefore more useful for analysis by users.

Many companies are now beginning to establish fully functioning internal control set-ups for non-financial reporting—often integrated with financial internal controls, as companies recognize that these areas can support each other. We also see companies starting to recognize the value of understanding their own resilience to climate change, resulting in a range of scenario testing solutions and related reporting. Can these be improved, more quantified and more monetized? Certainly. But this progress hopefully marks the beginning of a new era of higher-quality data that can enable more robust analysis by investors and other stakeholders, reducing reliance on sometimes-questionable ESG ratings – and hopefully enabling capital to be funnelled to the companies with the best solutions to the climate challenge.

We also observe that many companies do not treat the CSRD merely as a compliance exercise—it is not just a "tick-the-box" activity, as some might suggest. Instead, we see companies developing creative approaches to meet the needs of their report users, particularly in areas where regulation may not yet be fully operational. Examples include PPA (Power Purchase Agreement) reporting, which highlights companies that try to remediate an increased risk profile due to high energy consumption; the use of internal carbon pricing in impairment testing; and the creation of simplified supplementary taxonomy reporting. These initiatives are often innovative, practical, and inspiring—offering potential value not only to peers but also to regulators.

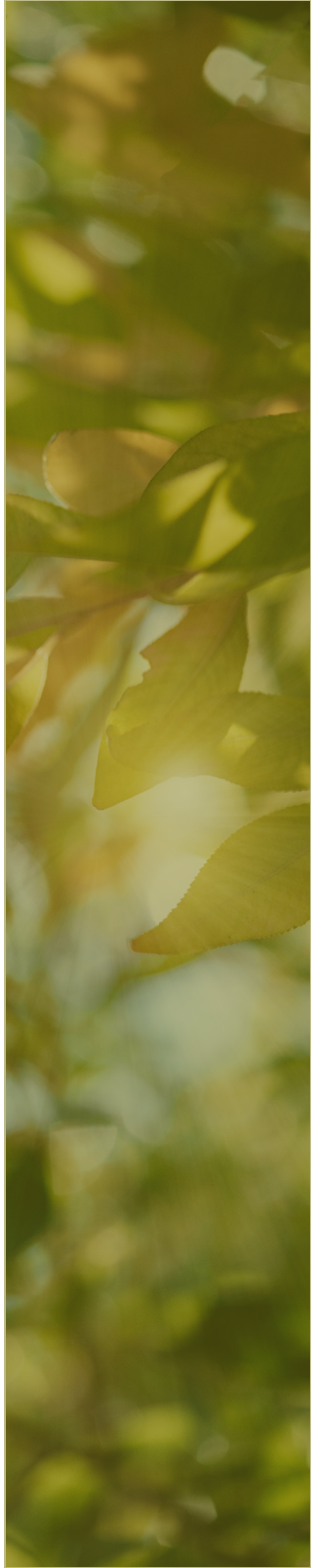
We hope you found the examples and evolving reporting practices both interesting and inspiring.

**Dr. Jane Thostrup Jagd**
Director, Net Zero Finance
We Mean Business Coalition

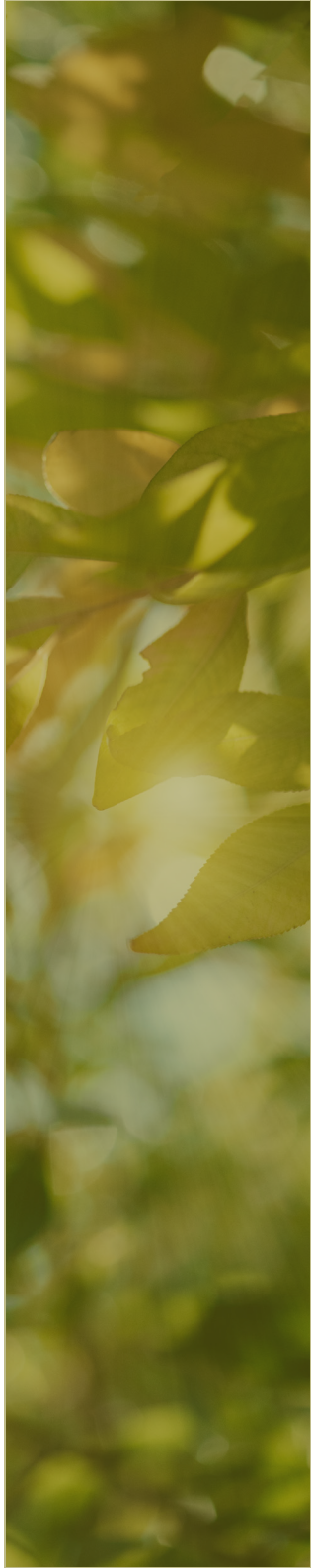


# OVERVIEW OF COMPANIES INCLUDED IN THE REVIEW

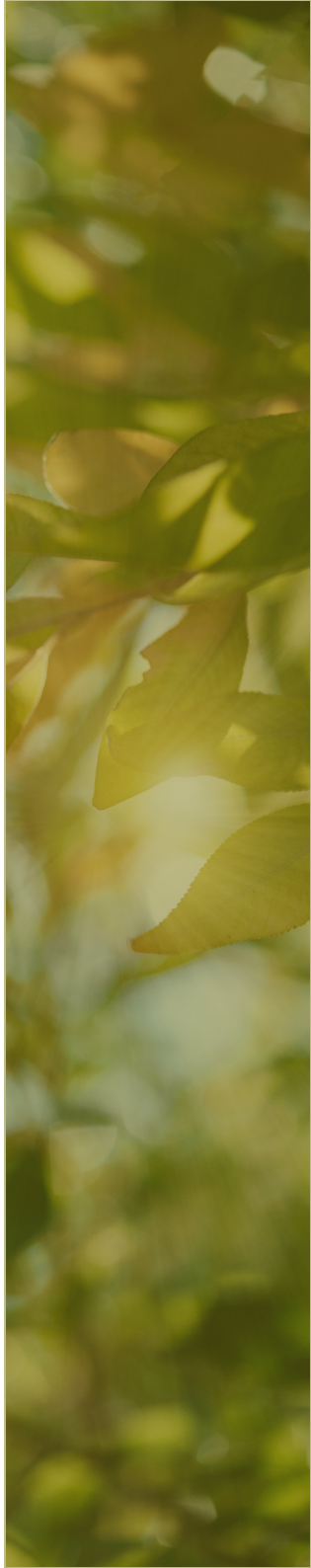
| Brand name | Legal company name with 2024 report link | | Country of Headquarters | TRBC Economic Sector Name |
|---|---|---|---|---|
| Adidas | Adidas AG | | Germany | Consumer Cyclicals |
| Adyen | Adyen NV | | Netherlands | Technology |
| Aena | Aena SME SA | | Spain | Industrials |
| Ahold Delhaize | Koninklijke Ahold Delhaize NV | * | Netherlands | Consumer Non-Cyclicals |
| Air Liquide | L'Air Liquide Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude SA | | France | Basic Materials |
| Airbus | Airbus SE | | Netherlands | Industrials |
| Allianz | Allianz SE | | Germany | Financials |
| Amadeus IT | Amadeus IT Group SA | | Spain | Technology |
| Anheuser-Busch | Anheuser-Busch Inbev SA | | Belgium | Consumer Non-Cyclicals |
| argenx | argenx SE | | Netherlands | Healthcare |
| ASM | ASM International NV | | Netherlands | Technology |
| ASML | ASML Holding NV | | Netherlands | Technology |
| Assa Abloy | Assa Abloy AB | | Sweden | Consumer Cyclicals |
| Atlas Copco | Atlas Copco AB | | Sweden | Industrials |
| AXA | AXA SA | | France | Financials |
| Banco Bilbao | Banco Bilbao Vizcaya Argentaria SA | | Spain | Financials |
| Banco Santander | Banco Santander SA | | Spain | Financials |
| BASF | BASF SE | | Germany | Basic Materials |
| Beiersdorf | Beiersdorf AG | | Germany | Consumer Non-Cyclicals |
| BMW | Bayerische Motoren Werke AG | * | Germany | Consumer Cyclicals |
| BNP Paribas | BNP Paribas SA | | France | Financials |



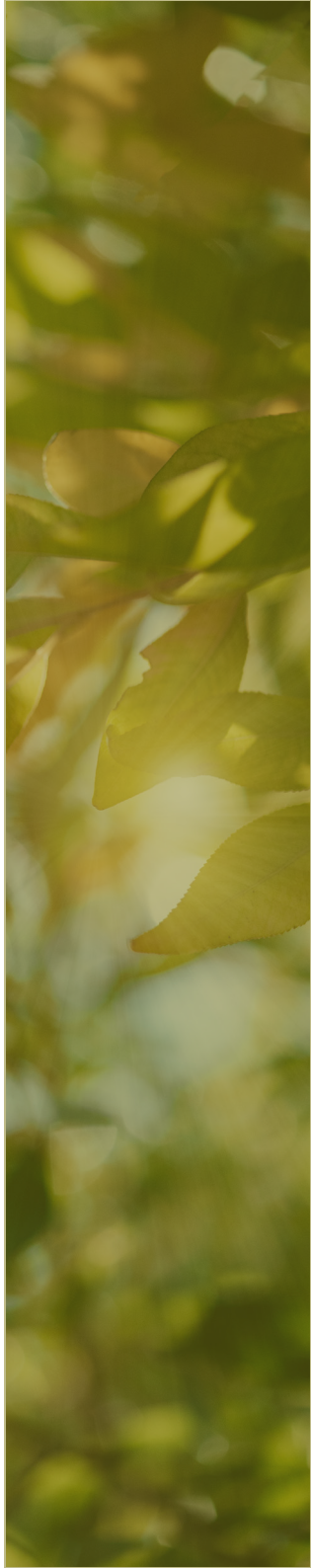
| Brand name | Legal company name with 2024 report link | | Country of Headquarters | TRBC Economic Sector Name |
|---|---|---|---|---|
| CaixaBank | CaixaBank SA | * | Spain | Financials |
| Capgemini | Capgemini SE | | France | Technology |
| Cellnex | Cellnex Telecom SA | | Spain | Technology |
| Christian Dior | Christian Dior SE | | France | Consumer Cyclicals |
| Credit Agricole | Credit Agricole SA | | France | Financials |
| Daimler Truck | Daimler Truck Holding AG | | Germany | Industrials |
| Danone | Danone SA | | France | Consumer Non-Cyclicals |
| Danske Bank | Danske Bank A/S | | Denmark | Financials |
| Dassault | Dassault Systemes SE | | France | Technology |
| Deutsche Bank | Deutsche Bank AG | | Germany | Financials |
| Deutsche Boerse | Deutsche Boerse AG | | Germany | Financials |
| Deutsche Post | Deutsche Post AG | | Germany | Industrials |
| Deutsche Telekom | Deutsche Telekom AG | | Germany | Technology |
| DNB | Dnb Bank ASA | | Norway | Financials |
| DSV | DSV A/S | | Denmark | Industrials |
| E ON | E ON SE | | Germany | Utilities |
| Endesa | Endesa SA | * | Spain | Utilities |
| Enel | Enel SpA | | Italy | Utilities |
| Engie | Engie SA | | France | Utilities |
| Eni | Eni SpA | | Italy | Energy |
| EQT | EQT AB | | Sweden | Financials |
| Equinor | Equinor ASA | | Norway | Energy |
| Ericsson | Telefonaktiebolaget LM Ericsson | | Sweden | Technology |
| Erste | Erste Group Bank AG | | Austria | Financials |
| Essilor | EssilorLuxottica SA | | France | Healthcare |
| Ferrari | Ferrari NV | | Italy | Consumer Cyclicals |



| Brand name | Legal company name with 2024 report link | | Country of Headquarters | TRBC Economic Sector Name |
|---|---|---|---|---|
| Ferrovial | Ferrovial SE | | Netherlands | Industrials |
| Generali | Assicurazioni Generali SpA | * | Italy | Financials |
| Hannover Re | Hannover Rueck SE | | Germany | Financials |
| Hapag-Lloyd | Hapag-Lloyd AG | | Germany | Industrials |
| Heidelberg | Heidelberg Materials AG | | Germany | Basic Materials |
| Heineken | Heineken NV | | Netherlands | Consumer Non-Cyclicals |
| Henkel | Henkel AG & Co KGaA | | Germany | Basic Materials |
| Hermès | Hermes International SCA | | France | Consumer Cyclicals |
| Hexagon | Hexagon AB | | Sweden | Technology |
| Iberdrola | Iberdrola SA | | Spain | Utilities |
| Inditex | Industria de Diseno Textil SA | | Spain | Consumer Cyclicals |
| ING | ING Groep NV | | Netherlands | Financials |
| Intesa | Intesa Sanpaolo SpA | | Italy | Financials |
| Investor | Investor AB | | Sweden | Financials |
| KBC | Kbc Groep NV | | Belgium | Financials |
| Kering | Kering SA | | France | Consumer Cyclicals |
| Legrand | Legrand SA | | France | Industrials |
| L'Oreal | L'Oreal SA | | France | Consumer Non-Cyclicals |
| LVMH | LVMH Moet Hennessy Louis Vuitton SE | | France | Consumer Cyclicals |
| Maersk | AP Moeller - Maersk A/S | | Denmark | Industrials |
| Mercedes-Benz | Mercedes-Benz Group AG | | Germany | Consumer Cyclicals |
| Michelin | Compagnie Generale des Etablissements Michelin SCA | | France | Consumer Cyclicals |
| Munich Re | Muenchener Rueckversicherungs-Gesellschaft in Muenchen AG | | Germany | Financials |
| Naturgy | Naturgy Energy Group SA | | Spain | Utilities |
| Nokia | Nokia Oyj | * | Finland | Technology |

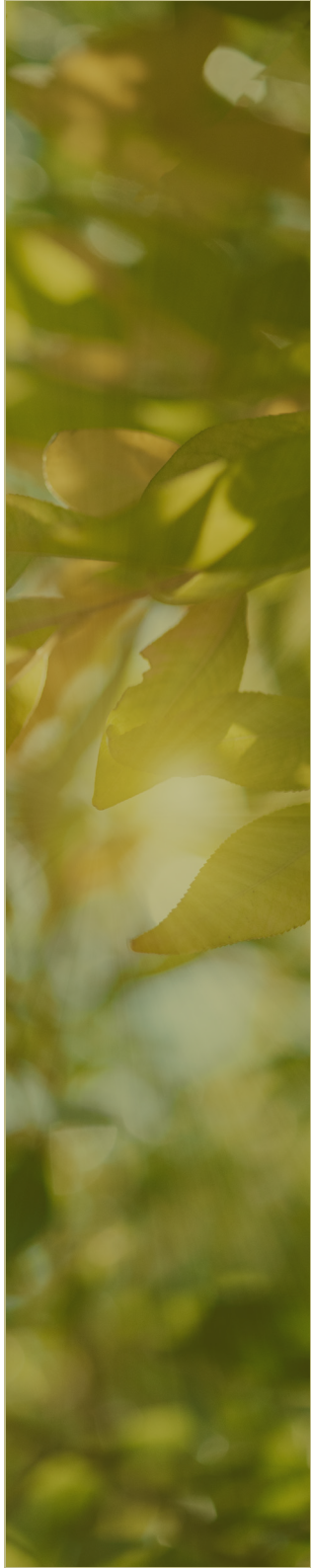


| Brand name | Legal company name with 2024 report link | | Country of Headquarters | TRBC Economic Sector Name |
|---|---|---|---|---|
| Nordea | Nordea Bank Abp | | Finland | Financials |
| Novo Nordisk | Novo Nordisk A/S | | Denmark | Healthcare |
| Novonesis | Novonesis A/S | | Denmark | Basic Materials |
| Orange | Orange SA | | France | Technology |
| Philips | Koninklijke Philips NV | | Netherlands | Healthcare |
| Publicis Groupe | Publicis Groupe SA | | France | Consumer Cyclicals |
| Rheinmetall | Rheinmetall AG | | Germany | Industrials |
| Safran | Safran SA | | France | Industrials |
| Saint Gobain | Compagnie de Saint Gobain SA | | France | Consumer Cyclicals |
| Sandvik | Sandvik AB | | Sweden | Basic Materials |
| Sanofi | Sanofi SA | | France | Healthcare |
| SAP | SAP SE | | Germany | Technology |
| Schneider Electric | Schneider Electric SE | | France | Industrials |
| SEB | Skandinaviska Enskilda Banken AB | | Sweden | Financials |
| Societe Generale | Societe Generale SA | | France | Financials |
| Stellantis | Stellantis NV | | Netherlands | Consumer Cyclicals |
| STM | STMicroelectronics NV | | Netherlands | Technology |
| Telefonica | Telefonica SA | | Spain | Technology |
| Thales | Thales SA | | France | Industrials |
| Total | TotalEnergies SE | | France | Energy |
| UCB | Ucb SA | | Belgium | Healthcare |
| UniCredit | UniCredit SpA | | Italy | Financials |
| Universal Music Group | Universal Music Group NV | | Netherlands | Consumer Cyclicals |
| Vinci | Vinci SA | | France | Industrials |
| Volvo | Volvo AB | | Sweden | Industrials |



| Brand name | Legal company name with 2024 report link | | Country of Headquarters | TRBC Economic Sector Name |
|---|---|---|---|---|
| Vonovia | Vonovia SE | | Germany | Real Estate |
| VW | Volkswagen AG | | Germany | Consumer Cyclicals |
| Wolters Kluwer | Wolters Kluwer NV | | Netherlands | Industrials |

* These reports take a long time to open or download—they will eventually load, but it takes considerable time.



# ENDNOTES

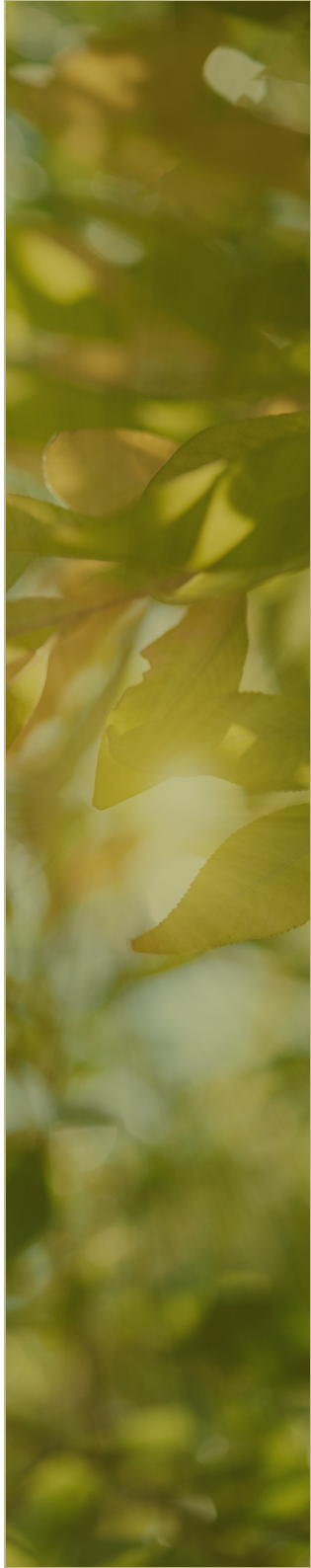
1. We Mean Business Coalition (2024) Early Adopters' CSRD Reporting - Inspiring reporting practice from reporting year 2023, Early adopters' CSRD reporting - We Mean Business Coalition

2. CSRD: Publications Office
ESRS: Commission Delegated Regulation (EU) 2023/2772 of 31 July 2023 supplementing Directive 2013/34/EU of the European Parliament and of the Council as regards sustainability reporting standards

3. Our primary source for establishing an overview of which countries had transposed the directive as of 31 December 2024 was from the law firm Gibson Dunn. We supplemented this with information from Accountancy Europe's transposition overview — although it only includes data from its member countries — and from the European Commission. However, the latter has been slow to update and is primarily focused on infringement procedures. For example, Sweden may not be covered by these procedures, as implementing laws retroactively is considered unconstitutional there.

4. It is, however, somewhat surprising not to see more qualifications. We recommend that assurers pay particular attention to the following fundamental issues:

- Companies that continue to use "homemade" data boundaries instead of the required ESRS boundaries.
- Companies collecting data based on non-reporting periods (e.g., October 1 to September 30) while their financial year follows the calendar year. This creates coherence issues with financial reporting, and integrated KPIs such as GHG intensities become, at best, inconsistent. Such discrepancies would never be acceptable in financial reporting. We understand that some companies find it challenging to produce ESG reports as quickly as financial reports. However, in such cases, companies should apply principles from financial "fast closing." For example, if the fast close occurs at the end of November, the metric data for December should be estimated based on, for instance, production forecasts. Failing to do so implies that it is assumed the company activity remains the same — an assumption that, for most, is hopefully not reasonable.
- Use of unaltered base data for targets from periods that have been drastically restated or erased, making development explanations problematic.
- Underreporting of energy data, especially when it clearly only includes electricity.
- Underreporting of Scope 3 downstream emissions.
- Taxonomy reporting where eligible CapEx appears incomplete.



5. This is a classic example, as many companies have chosen this model — likely because it is illustrated in E1-4 Application Requirement 31. However, it is only a "may" requirement, and it is perhaps not always sufficient to fully explain the company's plan.

6. See also IAS 8, Basis of Preparation of Financial Statements, IFRS - IAS 8 Basis of Preparation of Financial Statements

7. The spend-based method is a calculation approach where a company multiplies its cost per cost type by an average Scope 3 emission factor. This is a very common method in many online tools — and also the least precise.

8. Most financial institutions use the calculation methods from PCAF (Partnership for Carbon Accounting Financials), which promotes standardized methodologies to measure the financed emissions.

9. See Appendix C of ESRS 1 to get an overview of the phased-in disclosure requirements

10. See more in TCFD (2023) Task Force on Climate-related Financial Disclosure 2023 status report, 2023-Status-Report.pdf

11. WMBC (2023) EU green taxonomy in practice – white paper 2023,
EU GREEN TAXONOMY IN PRACTICE: WHITE PAPER 2023 - We Mean Business Coalition

12. Though not all remember to use the smaller table for nuclear activities.

13. For the Taxonomy analyses, we have used all 100 companies' reports.

14. See page 7 of EU Platform on sustainable finance (2025) Platform response to the draft taxonomy delegated act consultation,
https://finance.ec.europa.eu/document/download/15880258-db1b-4c9c-aedc-e4153a2817d4_en?filename=250325-sustainable-finance-platform-response-taxonomy-delegated-act_en.pdf

15. See Section II in this FAQ from the EU Commission: C_202300305EN.000101.fmx.xml

16. See also Commission Delegated Regulation (EU) 2021/2178, specifically in Annex I, Section 1.2.1.,
Commission Delegated Regulation (EU) 2021/2178 – Annex I