PwC's Third Annual State of Decarbonization Report

The business case for decarbonization has strengthened. Leaders are proving sustainability action improves margins, growth, and resilience.

The business case for decarbonization was supposed to break. It hardened instead. PwC's Third Annual State of Decarbonization Report shows how leading companies got there and what leaders should do next to stay ahead.

For sustainability leaders, the last year didn't just feel like a storm. It was one.

Federal funding that catalyzed a generation of clean energy projects? Axed. Some sources and projects were outright eliminated. Others sunset, forcing companies to quickly get shovels in the ground or lose out.

Sustainability programs built over years were suddenly treated as liabilities, questioned both for impact and for optics. Landmark disclosure regulations were challenged as the ink was drying. And all the while, the threats these programs address, like extreme weather, geopolitical volatility, and fractured supply chains, kept intensifying.

The narrative wrote itself: sustainability had peaked. Time to move on.

Except that's not what happened.

This report draws on AI-enabled insights of millions of data points from across thousands of corporate disclosures and related documents. What we found tells a different story. Many companies changed how they talk about sustainability but not what they do about it. Commitments were persistent even as the ground shifted beneath them.

- Eight in ten (82%) companies held steady or accelerated the timeline they needed for achieving their ambitions.[1,2]
- More companies are increasing ambitions (23%) compared to those decreasing (18%).[1,2]
- Progress held, with more organizations being on track to meet their targets than in prior years.[1,2]

Let's be clear: this does not mean the world is on track to meet its climate goals. It does suggest, however, that corporate decarbonization efforts among disclosing companies are more durable than expected.

And honestly? We should have seen these findings coming. This pattern has repeated for three years running. The headlines declare retreat. The data tells us otherwise. Every time the real story is more complex, more resilient, and more consequential than the headlines suggest.

Here's what actually changed and why it matters: Fifteen years ago, sustainability was primarily a narrow cost efficiency and risk management play. Companies focused on reducing energy use and cutting waste, though efforts were often incremental and disconnected from core strategy.

In the years that followed, ambition accelerated, climate commitments expanded, science-based targets gained traction, and sustainability became a visible expression of corporate values and leadership.

Now sustainability is entering its next era defined by financial discipline and strategic precision. Companies are sharpening capital allocation, pressure-testing every move against resilience, risk exposure, growth and profitability. Organizations are treating sustainability the way they would any other strategic lever and a harder-edged question is being asked:

Can sustainability improve business economics?

The findings outlined throughout this report say yes: decisively.

As companies increasingly look at decarbonization through this new lens, five observations are coming into clearer focus:

- **Shifting from ambition to disciplined execution:** Commitments are getting serious and that's exactly what decarbonization needs. New targets grew just 7%,[1,2] but quality took precedence over quantity as commitments were increasingly science-based. Execution and progress on targets improved as more companies were on track against Scope 1 and 2 targets than in prior years.

- **Achieving energy resilience through sharper capital allocation:** Geopolitical energy shocks and surging demand caused electricity prices to spike, and policy changes phased out clean energy tax credits. Companies are spending less on decarbonization, yet are getting more from it.[3,4] And it's not by investing in supply, but by cutting waste, and prioritizing high-return initiatives, especially reducing energy demand. Investors are watching: In some hard-to-abate sectors, companies allocating higher shares of capital to climate transition-aligned activities are realizing stronger valuation premiums.

- **Derisking supply chains:** Most companies are operating with limited visibility where it matters most. Just 18% are consistently tracking supplier activities and emissions beyond tier 1.[5] While supplier engagement enables Scope 3 emissions reductions, high-impact sources often sit outside an organization's line of sight. Leaders are gaining competitive advantages by mapping supply networks, prioritizing engagement with high-impact suppliers, and establishing incentives and accountability to support their performance.

- **Designing decarbonization into products:** Scope 3 decarbonization is increasingly won or lost at the product level. Companies that are on track with their Scope 3 targets are more likely to have integrated sustainability practices across the product life cycle; 31% of on-track companies demonstrate strong adoption of product sustainability practices compared to 19% of those that are off track on Scope 3.[1,5] The commercial case is compelling: products featuring sustainability attributes can achieve a revenue uplift of 6% to 25%+ over products without such emphasis.[6,7,8,9,10]

- **Translating AI into emissions impact:** Companies are sitting on a potential game-changing solution. While 60% of companies are starting to use AI for decarbonization, less than 1% report measurable results. Companies that wire sustainability directly into AI systems can spot and capture emissions reduction opportunities at a scale and speed previously thought impossible.[5]

The following pages dive deeper into each of these five observations. For each, we present the data, explain what it means, and outline the implications for your business. Now, let's get into where progress is holding steady, where the business cases are strongest, and which levers you can focus on now that drive resilience and returns.

This report is designed to be read either as a cohesive narrative or as a set of modular insights. Use the hyperlinks at the bottom of each page to navigate directly to the sections most relevant to your priorities.

The State of Decarbonization, by the numbers

Ambitions

23%

of companies increased climate ambitions; while 18% decreased their ambitions[1,2]

Progress

69%

of companies are on track to hit Scope 1 and 2 targets, up from 67% last year[1,2]

Capital allocation

15%–59%

valuation premiums for companies in key sectors that are allocating more capital to the climate transition[3,4]

Energy resilience

7%–25%

increase in energy prices making energy optimization an increasing imperative[11]

Supply chain

18%

of companies are consistently tracking supplier activities and emissions beyond tier 1[5]

Product sustainability

8%–13%

higher profitability for consumer goods and retailers that effectively integrate sustainability into product design[3,5]

AI in decarbonization

60%

of companies report using AI for decarbonization but just 1% are reporting an impact on emissions[5]

Product sustainability

33%

of revenue is expected to be aligned with the climate transition by 2030[1]

01

Shifting from ambition to disciplined execution

Climate commitments—The new signal isn't louder ambition. It's disciplined follow-through.

In a year that tested many organizations, resolve on decarbonization endured. Eight in ten companies (82%) kept their climate commitments steady or accelerated the timelines for achieving them.[1,2] Progress held, too: as shown on the following pages, more companies reported they're on track to achieve their targets than in prior years.

Still, nearly one in five companies (18%) decreased their climate ambitions against a backdrop of higher costs, tighter capital, and policy uncertainty.[1,2] While some stepped back from prior commitments or reduced the absolute quantity of emissions they plan to abate, not every pullback signaled retreat.

In some cases, it reflects healthier discipline—organizations recalibrating with better data, tighter governance, and more realistic execution plans. The result may be fewer headline-grabbing promises, but commitments that are more credible, financeable, and deliverable.

More companies are amping up their climate targets—23% increased ambitions while 18% decreased[1,2]

Companies that increase their ambitions or hold them steady are responding to three realities that encourage durability:

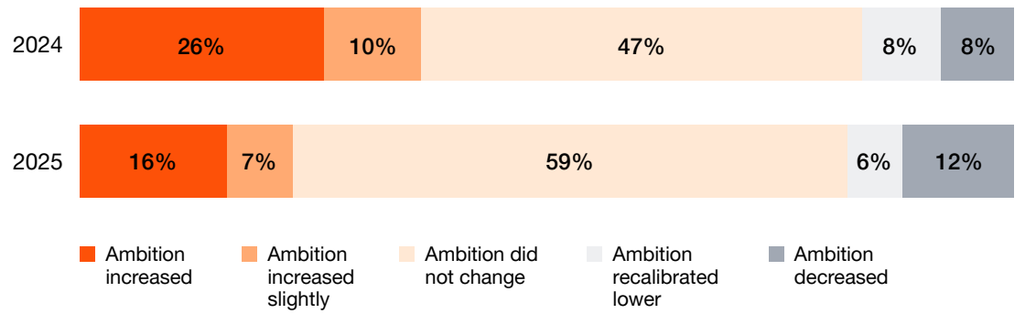
Pressure is moving upstream: Many suppliers are feeling pressure from their largest customers to set targets, to provide carbon emissions data, and to produce more sustainable products.

Economics are strengthening: Decarbonization is delivering across cost, growth, and risk. Companies are prioritizing high-return actions like energy efficiency and operational optimization, while rising demand for low-carbon products is unlocking new revenue opportunities. Ongoing energy volatility is further positioning decarbonization as a buffer against uncertainty.

Physical and transition risks are better understood: Due in part to efforts made to prepare for regulations such as CSRD[12] and California's SB 261,[13] companies realize they need to fortify the business against physical and transition risks. Target-setting is increasingly tied to reducing exposure and protecting value at risk, not just signaling intent.

Year over year growth in ambitions

(% of companies)



Individual values may not sum to the total due to rounding.

Source: PwC analysis, CDP (2024–2025)

Fewer new target-setters, but higher quality commitments

The pace of new target announcements slowed and that's the part many observers are most likely to misread.

In 2025, the number of companies announcing new decarbonization targets grew 7%, stabilizing after a 29% increase in 2024 and a 45% increase in 2023. After years of rapid adoption, the pool of large public companies that have not established targets is naturally shrinking.

While the number of new targets being set is declining, new targets are increasingly rigorous with most companies setting science-aligned or externally validated science-based targets.

Companies are influencing suppliers to set targets

The ripple effect of target setting by large companies, coupled with regulatory pressures, shows up in the data in two ways. The first is the strong increase in target-setting by companies in the Asia and Oceania region, an area key to many supply chains. The second is the decrease in median revenue for companies setting Scope 1 and 2 targets. The median was $1.1 billion in 2025, down from $4.1 billion in 2020.[1,2,3]

While indirect Scope 3 emissions are largely out of companies' control, these two datapoints indicate larger companies are leaning on their suppliers to make progress on cutting emissions.

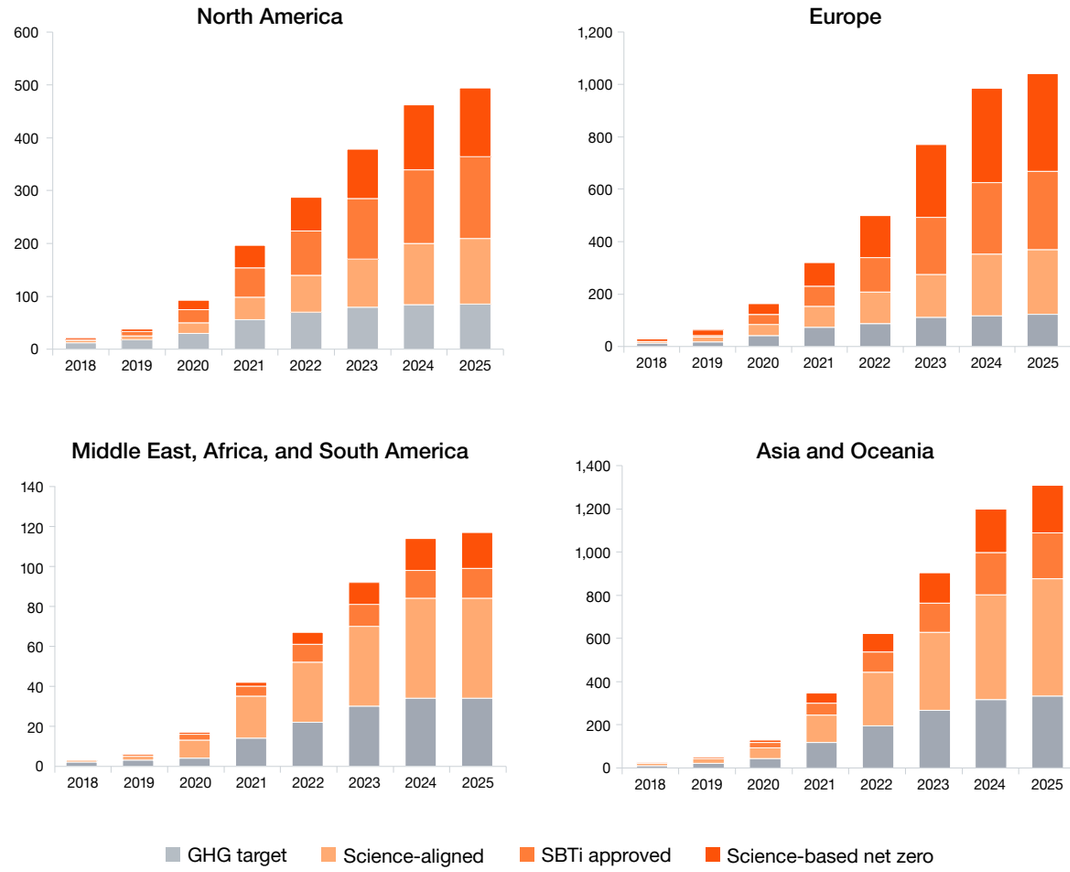
Looking ahead, we expect a wave of companies to reassess their targets. Some will revalidate existing commitments when they are required to do so, while others will establish new targets as milestones dates approach or reassess in response to shifts from peers and customers. With potential changes to the GHG Protocol[14] and target-setting frameworks, this process will require careful analysis and forecasting to determine the right path.

7%

year-over-year growth in companies setting decarbonization targets in 2025.[1,2]

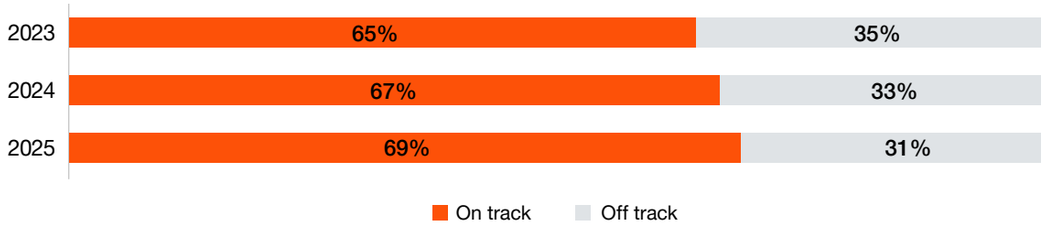
Growth in companies with decarbonization targets

(# of companies)



Source: PwC analysis, CDP (2024–2025)

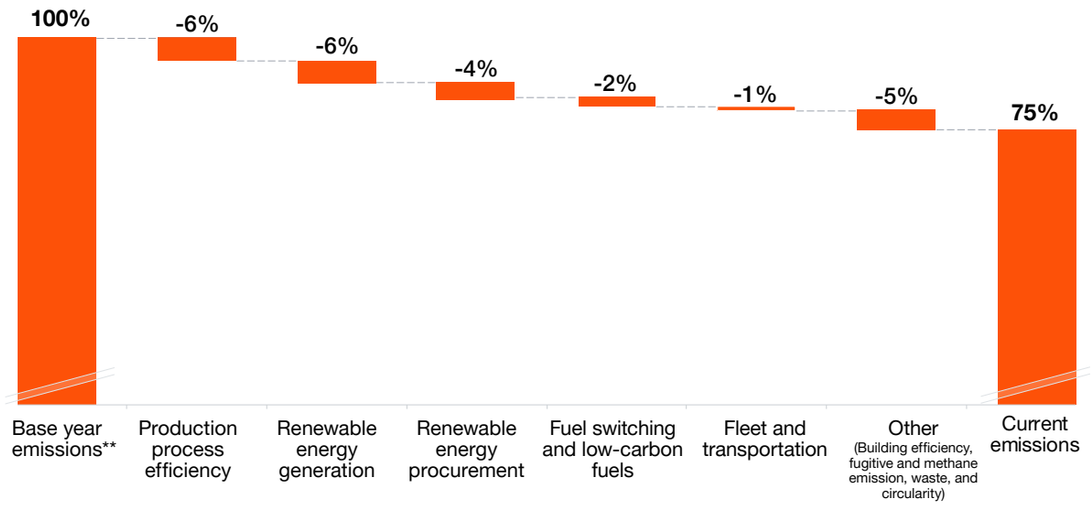
Year over year progress against targets (Scope 1 and 2)



Source: PwC analysis, CDP (2024–2025)

Note: Assessment of whether companies are on or off track is based on expected emissions reductions under a linear trajectory from each company's baseline year to its target year.

Aggregated GHG emission reduction by lever across all companies (Scope 1 and 2*)



Individual values may not sum to the total due to rounding.

Source: PwC analysis, CDP (2025)

*Scope 2 market-based emissions are considered for this analysis.

**Base year refers to baseline year set by each company for its emission reduction target; it varies across companies.

Steady progress, but hard work remains on Scope 1 and 2

Despite energy supply constraints and changes in the US energy policy, the steady march on Scope 1 and 2 reductions continues; more companies are on track to achieve Scope 1 and 2 targets in 2025 than were in 2023 or 2024.[1,2]

Companies are developing more detailed and actionable plans to achieve their targets, and many have moved aggressively on Scope 2 and renewable energy efforts, whether building their own onsite renewable energy sources or purchasing renewable energy from others.

> More companies are on track to achieve operational emissions targets in 2025 than in previous years[1]

Scope 2 decarbonization may become more challenging in the future as hyperscalers' energy demand swells to accommodate AI and data center capacity, while US clean energy production and investment tax credits have been eliminated and large scale wind projects have been stalled. Meanwhile, proposed Greenhouse Gas Protocol[14] updates would place more stringent requirements on renewable energy procurement, including geographic and time-matching of supply and demand.

Scope 1 is where operational decarbonization is often most challenging.

Reductions to on-site emissions are capital-intensive, operationally complex, and slow to execute, requiring asset-level analysis of fuel and refrigerant sources and clear pathways to electrification or alternative fuels. Each decision carries implications for cost, timing, and operational performance.

The result: only 46% of companies are on track for Scope 1—unchanged from the prior year—which represents more than 80% of operational emissions across the organizations we analyzed.[1] Leaders are tackling this by tying decarbonization to asset replacement cycles, using natural reinvestment points to reduce fuel demand and associated costs and emissions. This requires tight coordination with finance to unlock and time the necessary capital expenditures (CapEx).

Progress looks different across industry sectors

Like last year, we see that sectors in which ambitious targets are prevalent tend to be ahead of conservative target-setting sectors. Among on-track companies, we continue to observe a strong delineation in decarbonization strategies between high-emitting, "hard-to-abate" sectors and lower-emitting sectors.

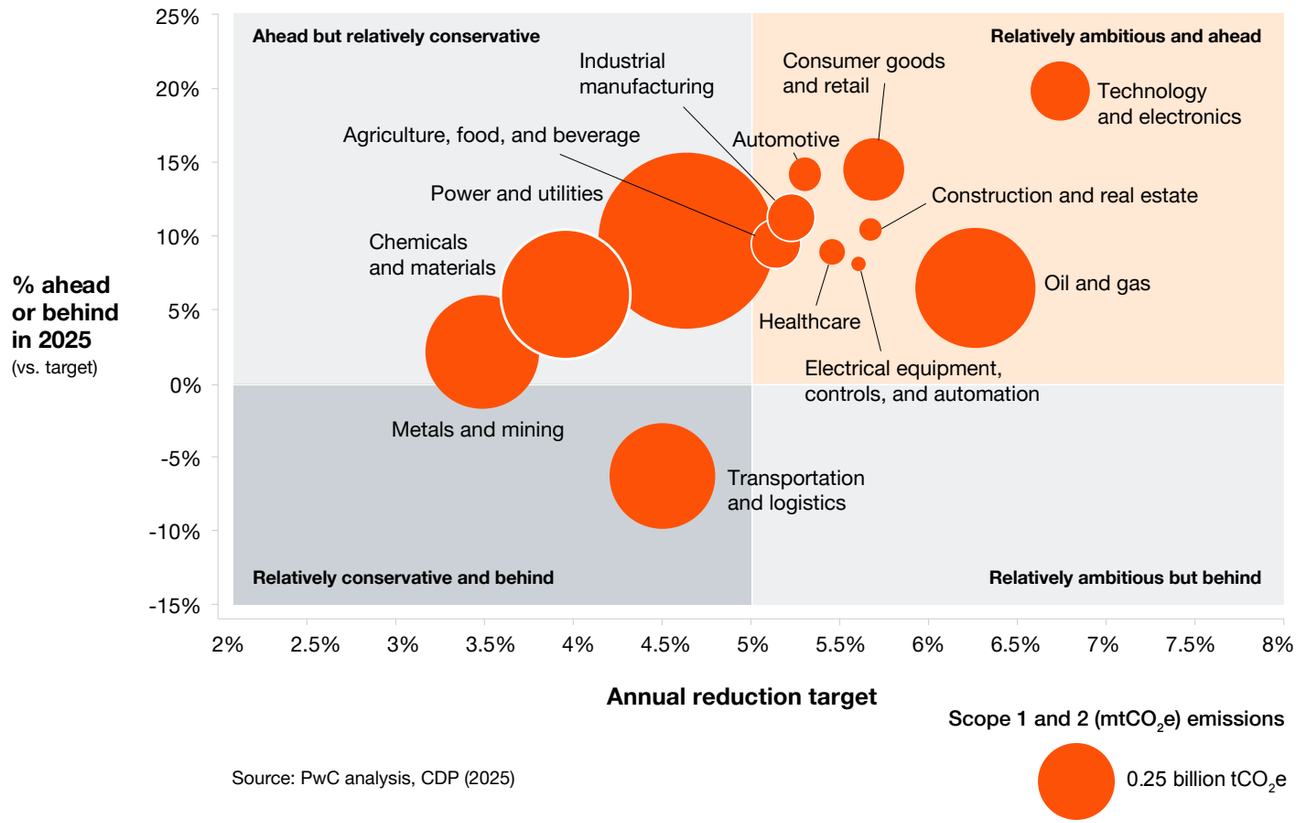
Hard-to-abate sectors heavily skew toward Scope 1 emissions and on-track companies are successfully reducing these emissions through process efficiency and leak prevention. The pace of these reductions has slowed even as commitments from oil and gas and power and utilities have risen, suggesting that more capital-intensive reduction measures will be necessary going forward.

Lower-emitting sectors lean toward Scope 2 emissions and the dominant decarbonization strategy has been renewable electricity procurement, usually through contractual instruments such as unbundled renewable energy certificates (RECs) and virtual Power Purchase Agreements (vPPAs).

Companies are challenged to adopt increasingly sophisticated decarbonization strategies to stay on track

To maintain the pace of progress, companies across all sectors will be challenged to develop more diversified and sophisticated decarbonization strategies. They will need to double-down on energy demand reduction programs, mobilize capital expenditures into lower-emitting assets, and advance their renewable energy strategies for new market and accounting paradigms that may be on the horizon with proposed changes in how Scope 2 emissions will be tracked.[14]

Scope 1 and 2 progress vs. ambition

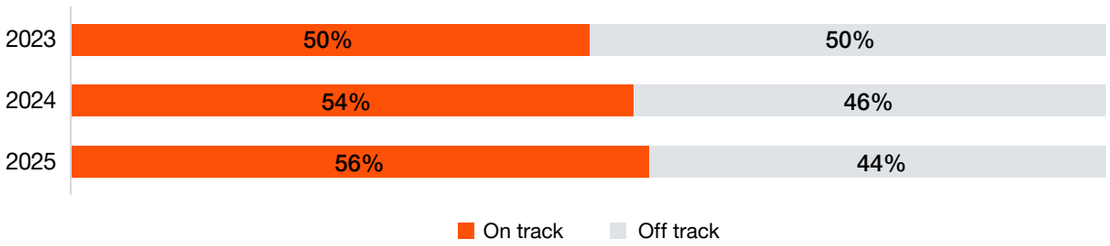


Source: PwC analysis, CDP (2025)

Note: Ambition refers to the annual emissions reduction target set by a company, with higher reduction rates indicating greater ambition.

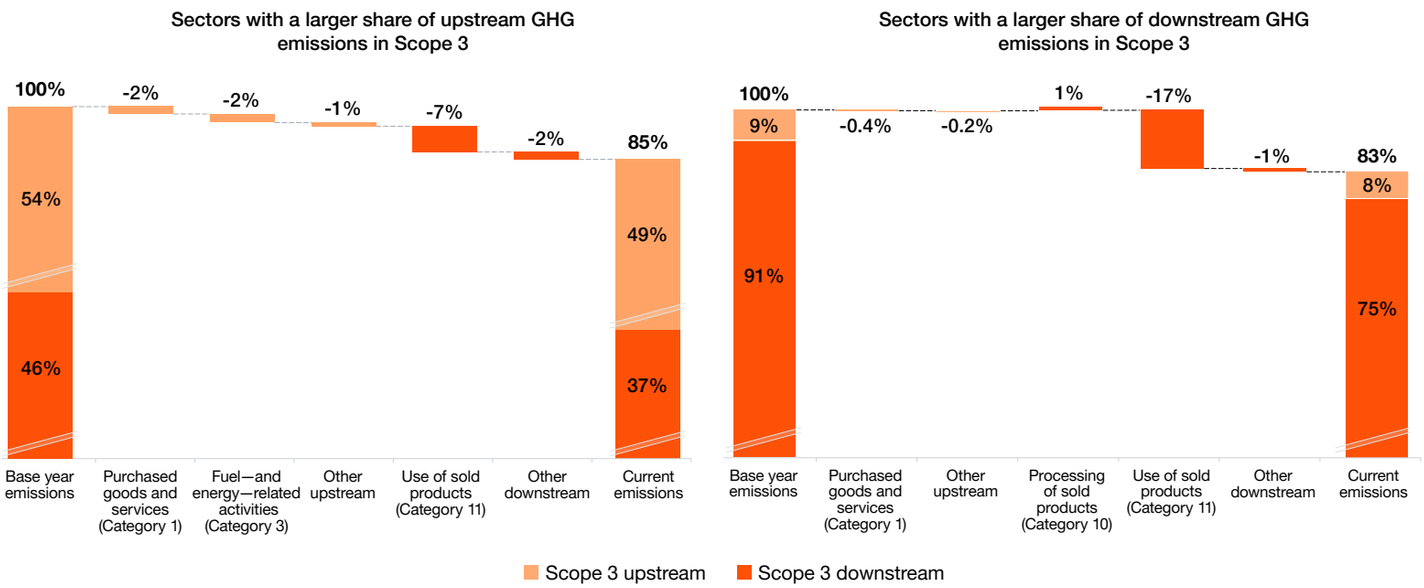
While ambition levels vary across companies, most sectors remain on track to meet their emissions reduction targets[1]

Year over year progress against targets (Scope 3)



Source: PwC analysis, CDP (2024–2025)

Aggregated GHG emission reduction by category across all companies (Scope 3 emissions)



(Agriculture, Food and beverage, Chemical and materials. Consumer goods and retail, Healthcare, Power and utilities, Transportation and logistics)

(Automotive, Construction and real estate, Electrical equipment, control, and automation, Oil and gas, Metals and mining, Industrial manufacturing, Technology and electronics)

Individual values may not sum to the total due to rounding.
*Base year refers to baseline year set by each company for its emission reduction target; it varies across companies.
Source: PwC analysis, CDP (2025)

Scope 3 progress powered by product level focus

Scope 3 dominates most companies' emissions profiles, far exceeding operational emissions.[1,2] As a result, the credibility of decarbonization strategies increasingly depends on progress beyond the company's own operations, covering activities from upstream suppliers and the downstream processing and use of products.

Progress, however, remains uneven. While many companies have strengthened their operational decarbonization programs, Scope 3 reductions are proving harder to capture. Fifty-six percent of companies are currently on track against the Scope 3 emissions reduction pathways they have set, reflecting the complexity of influencing emissions that sit outside companies' direct control.[1] Unlike Scope 1 and 2 reductions, which rely on levers that can be initiated independently, such as energy efficiency or renewable energy procurement, Scope 3 progress requires coordinated change across suppliers, customers, and entire industry ecosystems.

Overall, reductions in Scope 3 category 11 emissions (i.e. product use-phase emissions such as fuel burned in vehicles, electricity consumed by appliances, or energy used to operate industrial equipment) account for the largest share of reductions, indicating the impact of product design, efficiency, and electrification as decarbonization levers, especially in the sectors with a larger share of downstream emissions.[1]

Leading companies are evolving products to consume less energy and natural resources, enable electrification, and reduce life cycle impacts. These product-level interventions are an early signal that decarbonization strategies tied to innovation and market demand can deliver results even as value chain coordination remains difficult.

Scope 3 performance improving but uneven across sectors

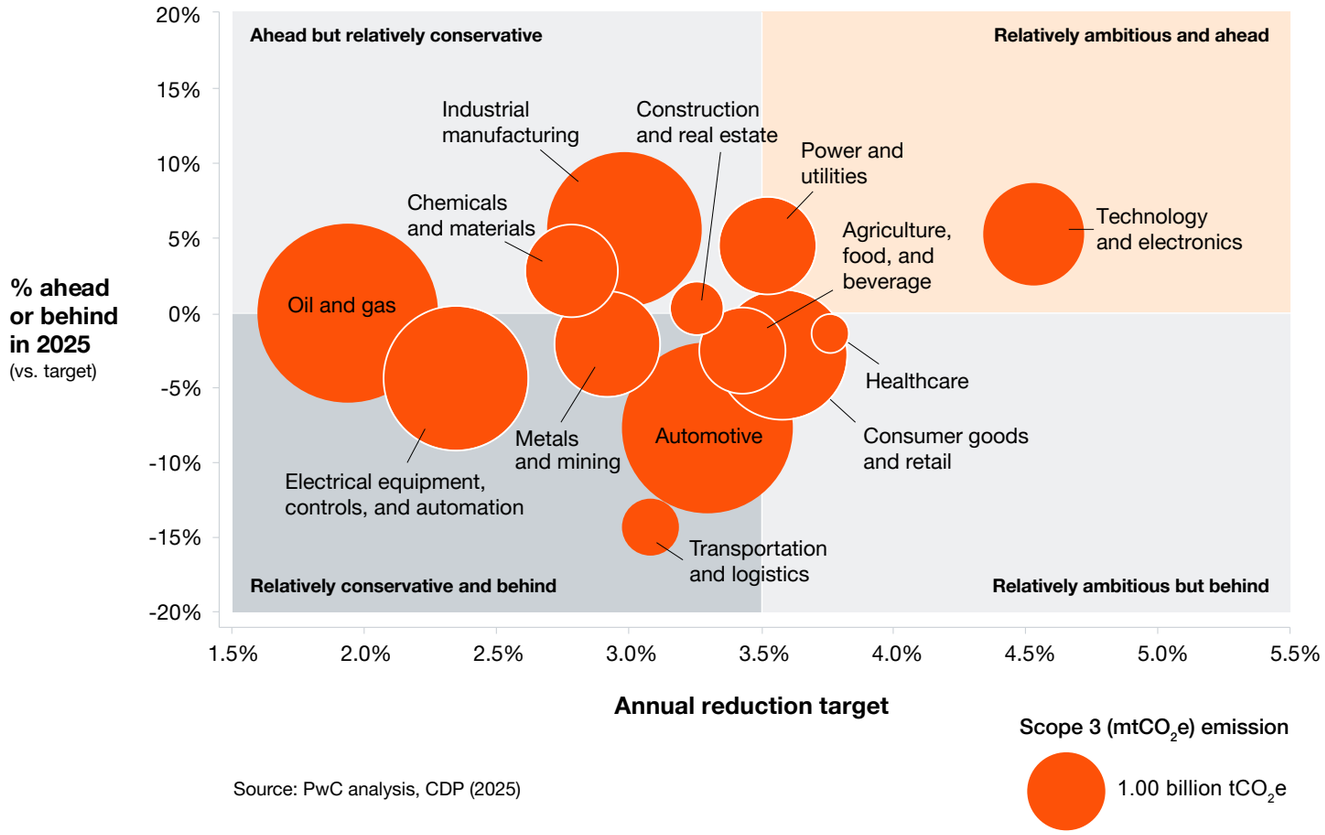
Similar to Scope 1 and 2, there is a positive correlation between Scope 3 ambition and progress at the sector level. Those sectors with more ambitious targets tend to be progressing more quickly toward targets.[1]

However, sector performance remains uneven, with more sectors falling behind the pace needed to hit their targets than staying ahead. The sectors and companies showing stronger performance share several common characteristics: deeper supplier engagement programs, improved value chain data, and more targeted procurement and product design levers.

The biggest risks remain concentrated in a handful of high-impact sectors. Electrical equipment manufacturing, transportation and logistics, automotive, and consumer goods and retail show some of the largest gaps between ambition and progress. In these sectors, decarbonization outcomes depend heavily on external adoption curves such as clean energy infrastructure, low-carbon materials availability, and consumer technology shifts. Progress therefore hinges not just on corporate commitments, but on value chain ecosystem readiness.

There are also early signs that the foundations for faster progress are being built. The number of companies disclosing Scope 3 emissions or expanding the reporting scope to include additional emissions categories increased by 30% in 2025.[1,2] As companies expand reporting coverage and improve value chain data quality, the practical levers for reduction become clearer. The next phase of Scope 3 decarbonization will be defined less by new targets and more by the ability to operationalize supplier programs, product redesign and reuse, and procurement standards at scale.

Scope 3 progress vs. ambition



Source: PwC analysis, CDP (2025)

30% of companies have improved Scope 3 emissions accounting compared to previous year[1,2]

02

Achieving energy resilience through sharper capital allocation

Achieving energy resilience

The rules have changed. Energy is now a strategic vulnerability.

Amid rolling blackouts, rate spikes, and supply risk, 2025 was the year energy resilience became a widespread board-level priority. Surging AI data center demand, long-neglected grid infrastructure, and the shifting regulatory landscape collided to push electricity prices up by 7% to 25% across the US,[11] affecting companies' bottom lines and hitting their customers in the pocketbook. The shift in attention has been swift and measurable: Google search interest in "energy resilience" surged roughly tenfold,[15] reflecting how quickly the issue moved from niche operational concern to strategic priority across industries and geographies.

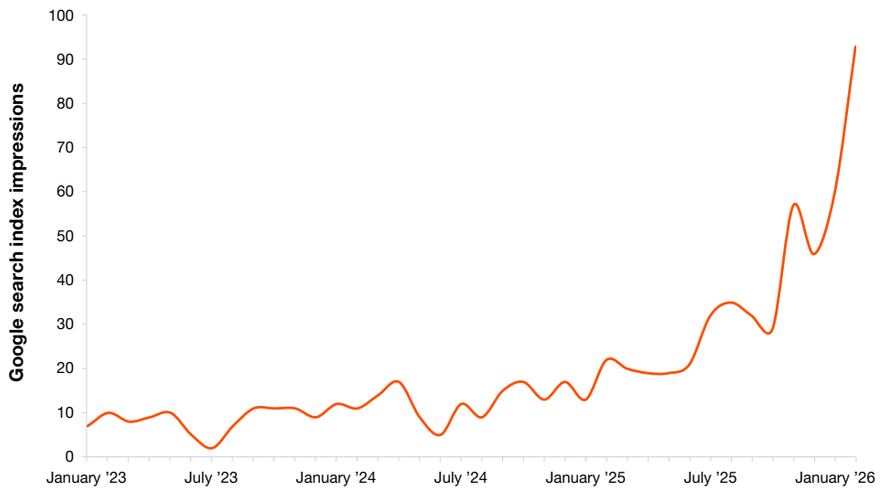
At the same time, reliability concerns are also growing. The North America Electric Reliability Corporation's long-term grid reliability assessment points to mounting resource adequacy risks over the next decade[16] as demand growth outpaces resource additions in key markets. Outages due to extreme weather are also on the rise: US Energy Information Administration reported that US customers experienced an average 11 hours of electricity interruptions in 2024, nearly double that of the prior decade, with storms accounting for most disruptions.[17]

Globally, companies have had to absorb three geopolitical energy shocks in just four years. Russia's invasion of Ukraine triggered what the IEA called the first truly global energy crisis, with euro-area gas prices jumping about 180% and power prices rising sharply.[18] More recently, conflict and shifting sanctions have affected the supply of Venezuelan crude and the flow of petroleum through the Strait of Hormuz, reinforcing how quickly geopolitical disruption can spill into corporate energy costs and supply risk.

Altogether, this is an environment where power and fuel are more costly and less reliably available, elevating energy strategy to be seen as increasingly critical to managing risk and sustaining competitiveness.

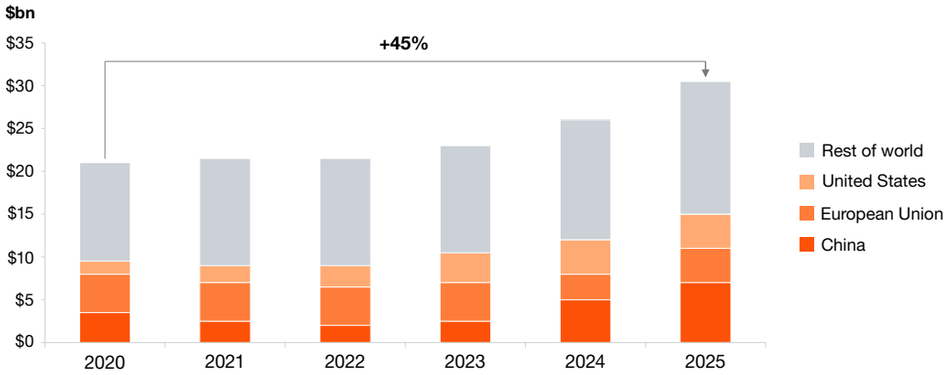
Companies are responding and the data shows it. Global investment in industrial sector energy efficiency rose 45% between 2020 and 2025, reaching approximately $30 billion[19] as companies sought to rationalize energy demand and insulate themselves from supply and price volatility.

Google Trends ("Energy resilience", January 2023 to February 2026)



Source: Google Trends

Growth in worldwide industrial sector energy efficiency investment

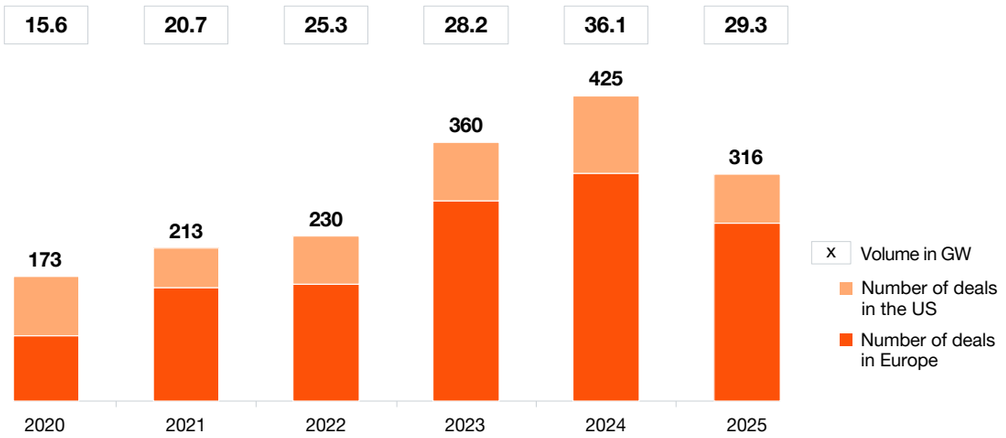


Source: IEA World Energy Investment 2025, USD 2024, MER

Note: In the IEA report, the industrial sector primarily refers to steel, cement, and manufacturing companies.

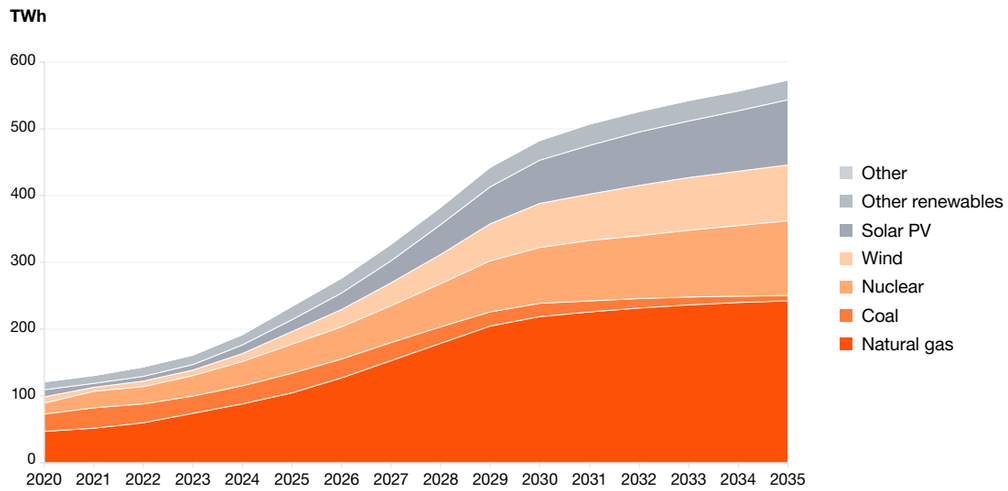
Navigating challenges ahead

PPA deal count and market volume



Source: Pexapark Renewables Market Outlook 2026

Electricity generation for data centers by fuel in the US



Source: EIA energy supply for AI

The pathway to decarbonizing energy consumption is getting narrower

Even as companies invest more in energy resilience, the pathway to decarbonizing energy consumption is becoming more constrained. Starting in 2025, a confluence of regulatory, market, and standard-setting shifts has made it materially harder for corporations to reduce the carbon intensity of the electricity and fuel they consume.

The policy environment that aided corporate renewable energy adoption is shifting, especially in the US. The 2025 “One Big Beautiful Bill Act” accelerated the phase out of key clean energy tax credits and introduced new domestic content requirements,[20,21] increasing uncertainty for new wind and solar projects and reducing the options for credible clean energy available to corporate buyers.

This impact is clearly visible in the market: total US and Europe contracted power purchase agreement (PPA) volumes fell by 19% and deal counts fell 26% year over year in 2025.[22] While there has been an uptick in clean energy deals in early 2026, that revival has been driven almost entirely by data center developer matching new AI-driven demand.[23]

Other corporate developers with smaller energy budgets may find themselves challenged to compete with hyperscalers for high-quality energy projects.

While this is happening, a tailwind many companies relied on is fading. For much of the past decade, grid-average emissions intensity declined as utilities added renewables and retired coal,[24] delivering a form of passive decarbonization that reduced location-based Scope 2 footprints without direct action. But that dynamic may be weakening in the future. In the US, the IEA projects that most of the increase in data center electricity demand through 2030 will be largely met by natural gas, potentially slowing the pace of grid decarbonization.[25]

Finally, GHG Protocol’s proposed Scope 2 revisions would shift market-based reporting from annual certificate matching to tighter hourly and regional (“deliverability”) matching.[14] If adopted, that could push companies toward more complex and potentially costlier procurement structures.

Taken together, these shifts are making energy decarbonization less straightforward and more dependent on increasingly limited, competitive, and complex market options.

A sharper allocation of capital

To-date, companies have benefited from tailwinds that kept capital expenditures light: cleaner grids, renewable energy credits and contracts, low-effort efficiency gains like LED conversions, and supportive policy incentives.

Going forward, the equation shifts. Tailwinds weaken or disappear, while pressures tied to energy resilience, regulation, and shifts in customer demand grow more immediate. The companies that outperform will be those that respond with focused, disciplined investment in climate transition–aligned activities.

In 2025, companies allocated slightly lower CapEx toward climate transition-aligned activities.[1] Yet we also saw more companies making progress against their climate targets, while holding or strengthening their climate ambitions.[1,2] Together, these trends suggest that companies are becoming more rigorous and thoughtful about where and how to invest in decarbonization—avoiding low-impact initiatives in favor of projects that feature lower marginal abatement cost of carbon.

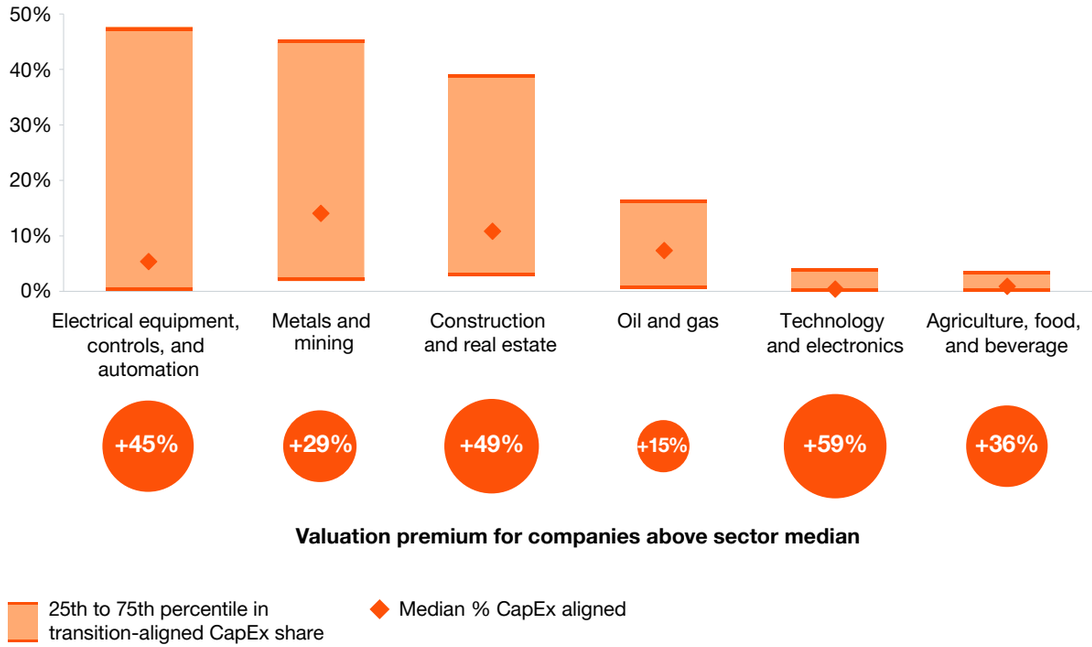
The European Union's Corporate Sustainability Reporting Directive (CSRD)[12] provides the market with something it's never had before—a standardized, audited view into who is meaningfully investing in the climate transition. PwC's analysis of more than 700 early company CSRD reports, which were largely issued by European companies, found clear patterns emerging among leaders and laggards.

In several hard-to-abate sectors—metals and mining, oil and gas, and construction and real estate—transition-aligned CapEx is consistently higher and companies that allocate higher shares are commanding stronger valuations.

In these sectors, where transition risk and adaptability is material and capital requirements are highest, investors are differentiating between decarbonization leaders and laggards.

The takeaway? Capital markets will reward smart moves that safeguard companies' future profitability but simply throwing money at the challenge is not enough. Companies should make investments aligned to core business strategy and with a strong business case, while also bringing a clear and coherent narrative to investors on how these actions create sustainable competitive and operational advantages in the climate transition.

Climate transition-aligned CapEx share and associated valuation premiums by sector (per EU taxonomy)



Source: Company CSRD Reports, PwC analysis

Companies in hard-to-abate sectors that allocate higher shares of CapEx to transition-aligned activities are commanding stronger valuation multiples[3,4]

What are leading companies doing differently on energy to build resilience?

As energy costs rise, grid reliability becomes less certain, and policy support shifts, companies are under growing pressure to manage energy more strategically. Leaders are moving beyond isolated projects to strategically allocating capital that reduces exposure, protects operations, and supports resilient decarbonization.

1. **They reduce exposure through smart capital allocation to reduce energy use.** Leading companies are grabbing quick wins in energy efficiency and then moving to targeted investments to lower cost and risk. Energy management systems, smart building technologies, and industrial sensors help pinpoint where interventions can drive the greatest benefits.

2. **They engineer reliability where it matters most.** Leaders prioritize mission-critical sites based on downtime costs and local grid conditions. They map critical loads, shift flexible demand, and deploy onsite assets such as battery storage and generation to support continuity of power.

3. **They electrify methodically with a clear business case.** In a more volatile energy environment, leading companies focus on applications where cost, performance, and emissions benefits are durable. They maximize capital efficiency by planning electrification retrofits around end-of-life timelines for existing assets. They factor the value of reliability and reduced risk into capital decisions, while stress-testing investments against local grid conditions.

4. **They build diversified and risk-aware energy portfolios.** Rather than relying on one-off contracts, leading companies combine procurement approaches that reflect when and where they use power. Renewable energy sourcing is integrated into this strategy, with careful attention to hedge value, basis risk, and the credibility of sustainability claims.

5. **They manage energy strategically and articulate its value to the market.** They govern energy as a strategic function and communicate it clearly to the market. Leading companies elevate energy to the board level while distributing decision rights across procurement, operations, finance, and sustainability. Externally, they link energy and decarbonization investments to cash flow, resilience, and competitive positioning, helping investors distinguish execution from ambition.

Together, these capabilities move companies beyond reactive energy management. They make energy resilience a durable driver of operational continuity, cost discipline, long-term decarbonization progress, and ultimately differentiation in the market.

03

De-risking supply chains

De-risking supply chains

Supplier visibility helps companies reduce disruption, margin erosion, and Scope 3 emissions

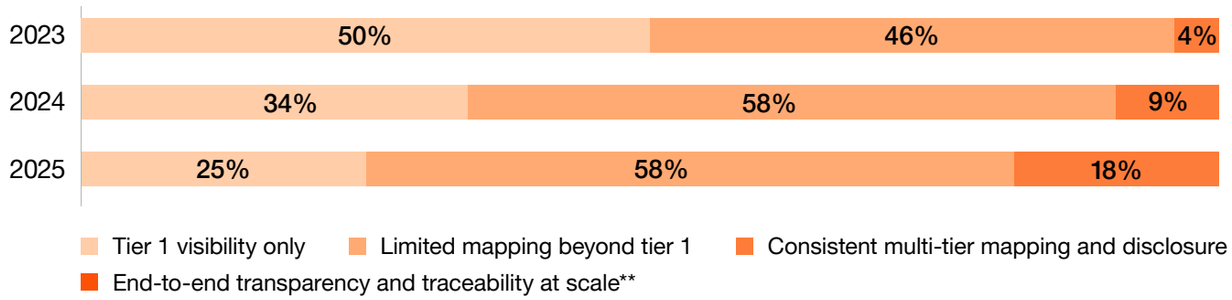
The ability to map suppliers and track material flows across the supply chain is increasingly important as geopolitical disruption, shifting tariffs, energy market volatility, and climate-driven raw material shortages increase uncertainty. With stronger visibility, companies can not only respond to disruption with greater agility but identify and address their most impactful sources of supply chain emissions.

Even as risks grow more acute and geopolitical crises more frequent, many companies are still navigating with limited maps of their supply chains. In a cross-sector sample of 158 Fortune 500 companies, 25% lack visibility beyond tier 1 suppliers, while 58% report partial tier 2 visibility, and just 18% consistently track supplier activities and emissions beyond tier 1.[5] This gap can create mismatches between effort and impact for companies who make and sell physical products and rely on complex supply chains. These companies act on what they can see and measure, while high-impact sources of emissions often sit outside their line of sight.

Supplier visibility can be an especially critical enabler in sectors in which emissions are concentrated deep in the supply chain, like agriculture, food, and beverage, consumer goods and retail, and healthcare. In these sectors, companies with limited upstream visibility can get stuck engaging tier 1 suppliers and distributors only—even when the bulk of emissions typically occur further upstream in materials and production. While these companies may be able to reasonably estimate emissions deep in their supply chains, gaps in data precision can limit their ability to account for upstream reductions.

By contrast, companies with a clear view deep into their supply chains have major advantages when it comes to Scope 3 decarbonization: they can better identify upstream emissions hotspots, engage suppliers where it matters most, and track progress over time with greater precision and confidence.

Supplier visibility* (2023 to 2025)



*Supplier visibility refers to companies' ability to identify suppliers and track upstream product and material flows and activities. Related programs include supplier mapping, product and material traceability systems, supplier data collection, and upstream due diligence.

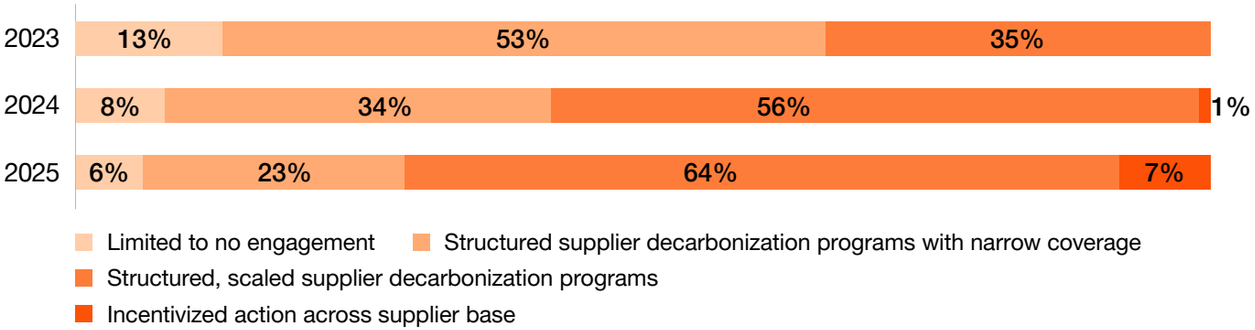
**No companies analyzed consistently demonstrated end-to-end traceability.

Source: PwC analysis based on companies' sustainability and supplier codes of conduct

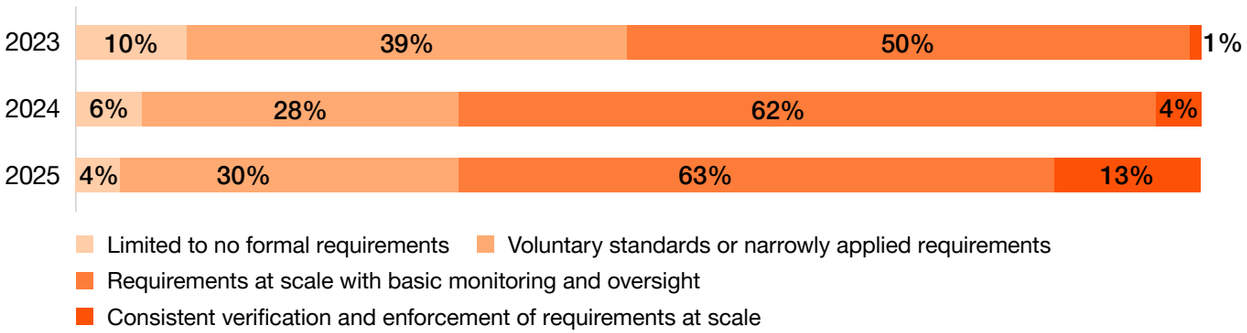
25%

of companies still lack visibility beyond tier 1 suppliers, while 58% report partial tier 2 visibility and just 18% have developed strong multi-tier capabilities[5]

Supplier engagement* on decarbonization (2023–2025)



Supplier decarbonization requirements** (2023–2025)



Individual values may not sum to the total due to rounding.

*Supplier engagement reflects the extent to which companies actively engage suppliers on climate performance through training, collaboration, performance feedback, and mechanisms to monitor supplier progress.

**Supplier requirements reflect the extent to which companies formalize expectations for suppliers through policies, contractual requirements, emissions disclosure expectations, and compliance oversight.

Source: PwC analysis based on companies' sustainability reports and supplier codes of conduct

Supplier engagement practices are scaling, but incentives and enforcement lag behind

Decarbonizing your supply chain can unlock resilience and competitive advantage

Companies that treat supplier engagement as a strategic priority are better positioned to reduce Scope 3 emissions, stabilize costs, and build resilience in an increasingly volatile operating environment.

Geopolitical fragmentation, shifting tariffs, climate-driven raw material scarcity, and energy market volatility are increasing uncertainty across supplier networks. Against this backdrop, the same actions that reduce upstream emissions, such as improving resource efficiency and strengthening supplier relationships, can also limit exposure to supply chain disruptions.

Our analysis shows that supplier engagement has improved substantially since 2023 and companies are evolving from voluntary standards toward formal supplier requirements.[5] However, enforcing or incentivizing those requirements remains limited, highlighting opportunities for companies to incorporate decarbonization into established processes, like scorecards and procurement requirements, to establish supplier accountability for climate performance while supporting their success.

In addition to incentives and enforcement, leading organizations segment suppliers to focus effort where it matters most—prioritizing those with the greatest emissions impact and strongest potential for influence. This results in deeper engagement with suppliers where collaboration can drive measurable outcomes and mutual value, often through targeted investments in training, coaching, and joint initiatives with high-leverage suppliers.

Advanced supplier capabilities unlock faster emissions reductions, lower costs, and more resilient sourcing

While Scope 3 decarbonization progress remains a challenge for many companies, targeted supply chain efforts are beginning to unlock progress.

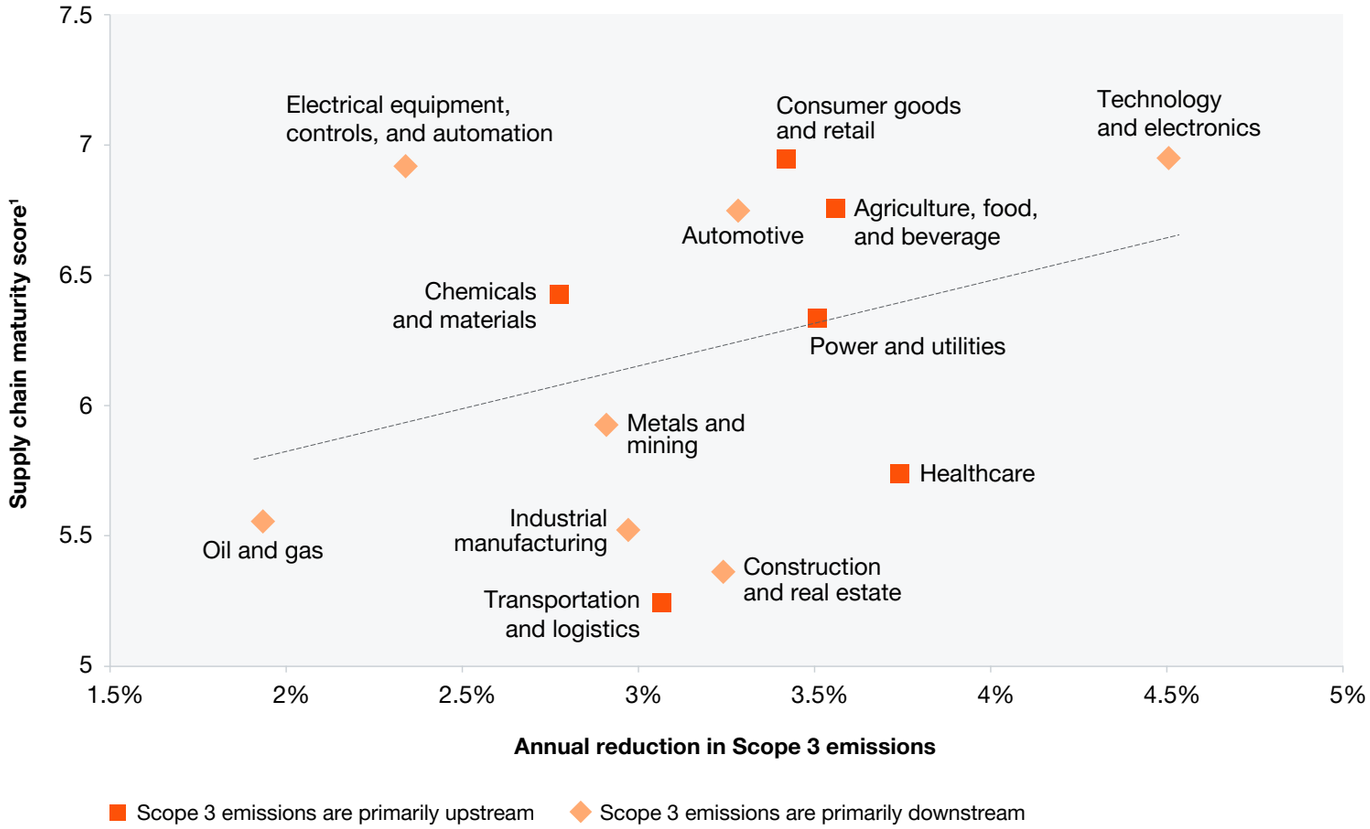
Our analysis shows that stronger supplier visibility, engagement, and requirements are associated with accelerated Scope 3 emissions reductions.[1,5] Progress on each of these capabilities is connected; visibility determines where to focus, requirements establish expectations, and engagement drives action. As these capabilities build on one another, they enable more targeted interventions and improved decarbonization results over time. Given this, we expect the relationship between leading supplier practices and Scope 3 reductions to strengthen in the years to come.

Stronger supplier management practices are associated with accelerated Scope 3 emissions reductions[1,5]

This tends to look different sector to sector. Leading companies in upstream emissions-heavy sectors, like agriculture, food, and beverage are successfully reducing supplier emissions through collaborative farm-level initiatives, while technology and electronics companies, whose emissions tend to aggregate downstream, are engaging suppliers to implement designs and materials that will enable their products to demand less energy when they are used.

Despite real challenges, including escalating supply chain disruptions, companies are laying down foundational supply chain capabilities to enable future progress on Scope 3.

Supply chain maturity and year over year Scope 3 emissions reductions (2025)



¹Supply chain maturity averages supplier visibility, engagement, and requirement scores

Score ranges:
1–2: Nascent
3–4: Developing processes and structure
5–6: Established capabilities
7–8: Advanced, effective, scaled initiatives
9–10: Leading end-to-end capabilities

Source: PwC analysis based on companies' sustainability reports and supplier codes of conduct, CDP (2025)

What defines leadership in supply chain decarbonization?

As supplier visibility improves, emissions data becomes more actionable, and engagement practices mature, companies are building the foundational capabilities to unlock Scope 3 progress—and strengthen the resilience and cost performance of their supply chains.

1. **They map beyond their first tier of suppliers.** Leading companies expand supplier mapping beyond tier 1 by requiring suppliers to disclose upstream partners, by tracing material and product flows, and by using data platforms to extend visibility into their supply chains—creating the transparency needed to act with precision rather than react under pressure.

2. **They establish accountability for supplier data quality and decarbonization progress.** Leaders prioritize supplier data collection and quality to help surface key risks and quantify embedded emissions more accurately. They often require suppliers to set emissions reduction targets and report emissions in a standardized way.

3. **They enable and incentivize suppliers to participate in the transition.** Leading companies recognize that suppliers often need more than expectations; they need support. Companies train suppliers on decarbonization approaches, collaborate on improvement initiatives, and often incentivize supplier action by providing access to funding for decarbonization investments ranging from renewable energy to equipment upgrades to regenerative agriculture.

4. **They focus effort where impact is greatest.** Rather than spreading attention evenly across the supply base, leaders prioritize the suppliers, materials, and production processes that account for the largest share of emissions and operational risk. This allows companies to accelerate progress while reducing exposure to energy volatility, constrained materials, and supply disruption.

Together, these capabilities help companies move supply chain decarbonization from a reporting exercise to an operational strategy. The result is a supply chain that is better equipped to reduce emissions, manage volatility, and support long-term performance.

04

Designing decarbonization into products

The real value of product sustainability

Scope 3 decarbonization outcomes are increasingly determined at the product level

Product strategy is where companies can design out value chain emissions, limit exposure to cost volatility, and address rising customer expectations.

Design decisions, spanning material selection to product functionality, can determine up to 80% of a product's life cycle environmental impact.[26] That makes product development one of the most powerful levers for reducing emissions, improving resource efficiency, and competing on environmental performance.

The commercial case is also compelling: studies show that products with differentiated sustainability attributes are realizing 6% to 25% revenue uplift, depending on sector and product type.[6,7,8,9,10]

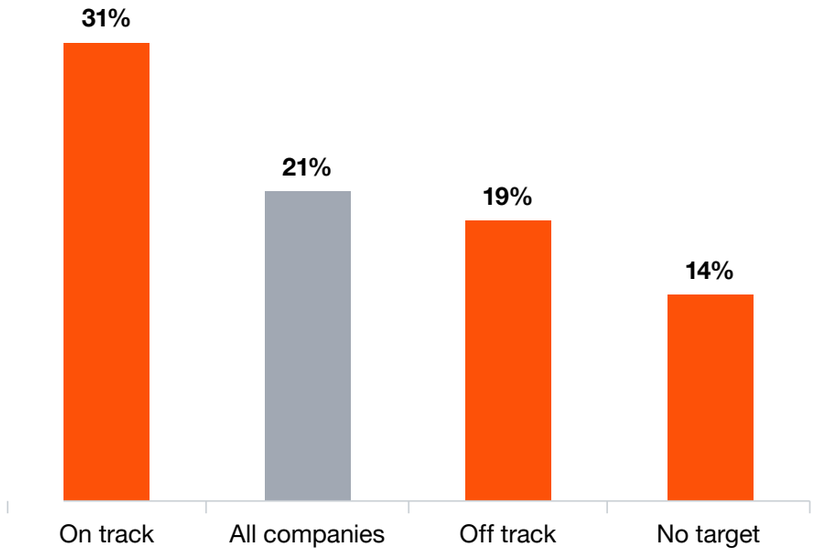
As a result, companies that embed sustainability into their products are not only able to reduce emissions, costs, and risks; they are creating opportunities to differentiate their products, and capture price premiums and new revenue streams.

Differentiation based on sustainability anchors back to decisions about materials, manufacturing processes, durability, commercial models, and end-of-life recovery. As climate-related disruptions and pressure to demonstrate Scope 3 reductions increase, these factors are increasingly linked to resilience and decarbonization progress.

The influence of product efforts on decarbonization performance is already visible. Companies that are on track with their Scope 3 targets are more likely to have integrated sustainability practices across the product life cycle. For the subset of Fortune 500 companies studied, approximately 31% of on-track companies demonstrate scaled adoption, compared to 19% of those that are off track on Scope 3, and 14% of companies without Scope 3 targets.[1,2,5] Product sustainability is emerging as a key mechanism for translating ambition into measurable progress.

As this shift accelerates, reliable product impact data is becoming a critical enabler. Companies are investing in product-level transparency, impact quantification, and external verification to support both internal decision-making and external product messaging. These capabilities will help define which organizations are better positioned to deliver product decarbonization impact, capture commercial value, and avoid greenwashing.

% of companies applying leading product sustainability practices (grouped by Scope 3 target status, 2025)



This figure shows companies that are factoring sustainability impact quantification, metrics, standards, and requirements into their product design, development, and broader life cycle decision making at scale. The companies are organized into columns based on their Scope 3 target status.

Product sustainability considerations include material selection, design for durability, reuse, and repairability, resource efficiency, and reduced life cycle environmental impact.

"At scale" conveys that the integration of sustainability is factored into design and life cycle decision making beyond an isolated group of products.

Source: PwC analysis based on companies' sustainability reports and CDP disclosures (2025)

Companies on track on Scope 3 are more likely to scale product sustainability (31% vs. 19% for those off track)[1,2,5]

Product sustainability is driving value creation, but many companies have work to do to meet revenue expectations

Sustainability-marketed products now represent 24% of US consumer packaged goods sales,[7] with even higher shares in markets such as the UK and Germany. Electric vehicles continue to grow in global market share, eclipsing 25% of all vehicles sold[27] despite a recent decline in the US market. That coincides with the trend toward electrification, enabled by the power and utilities, metals and mining, electrical equipment, controls, and automation, and construction and real estate sectors, each of which reported 30% revenue or more aligned to the climate transition.[1]

In consumer goods and retail, these offerings are increasingly linked to financial performance.

8%–13%

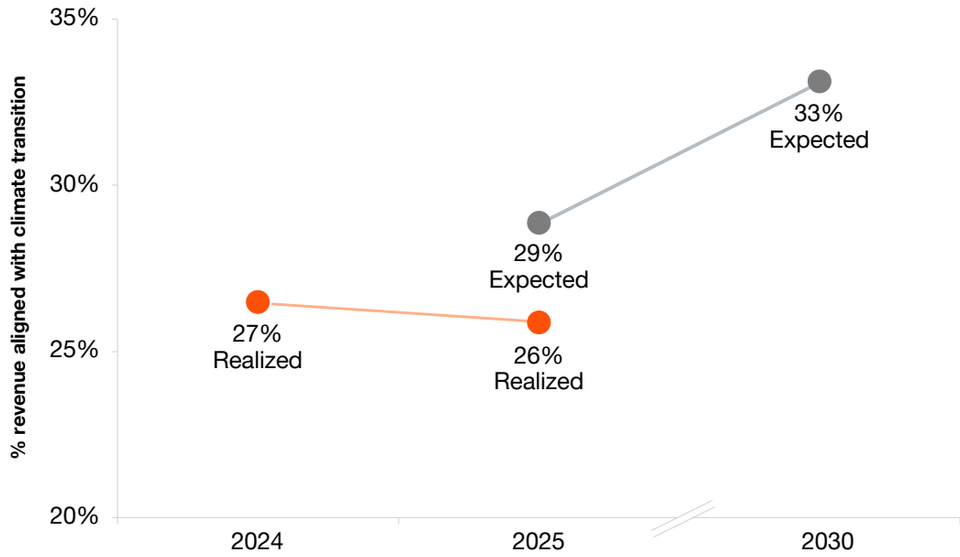
higher profitability for consumer goods and retailers that effectively integrate sustainability into product design[3,4]

Companies in this sector that are advanced in the integration of sustainability into product design are realizing 8% to 13% greater levels of profitability than less-mature peers and trade at higher valuation multiples.[3,4]

Many companies still treat product sustainability as a series of isolated initiatives, focused on a handful of products within a single function. Leading companies take a different approach. They clearly link product sustainability to enterprise priorities and define how each function contributes to improving the sustainability of the full product portfolio.

While companies project significant growth in climate transition-aligned revenue by 2030, actual progress toward near-term targets has fallen short of expectations.[1,2] We anticipate future growth opportunities for companies that advance their approach to product sustainability with rigorous substantiation and a clear connection to customer and company priorities.

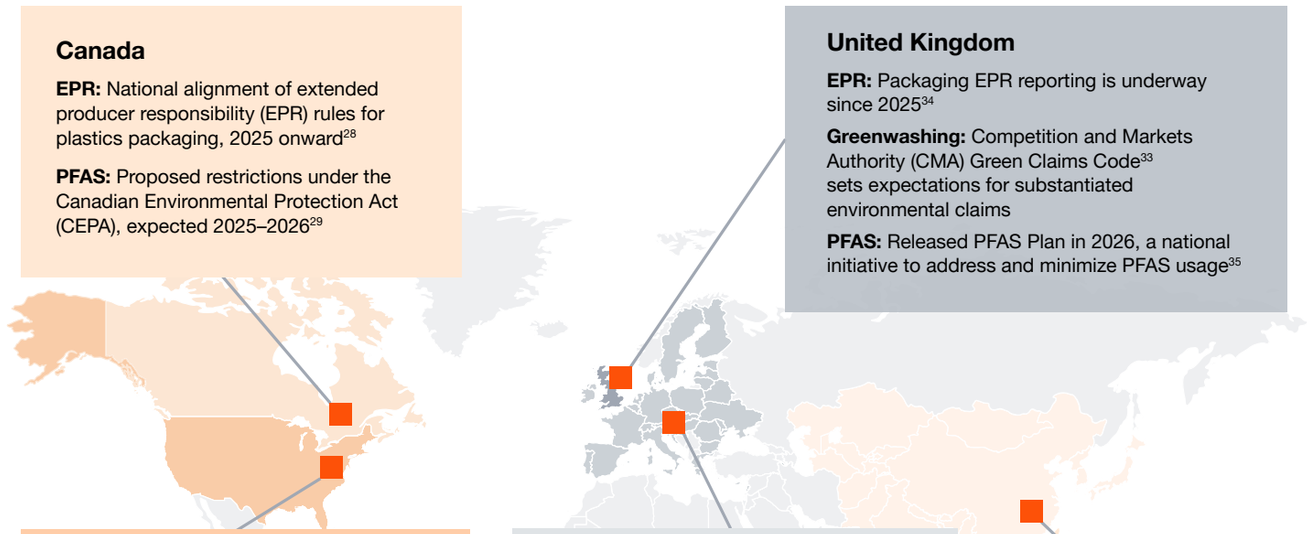
Realized and expected revenue aligned with the climate transition (2024–2030)



Source: PwC analysis, CDP (2024, 2025)

Although companies project growth in climate transition-aligned revenue by 2030, 2025 results lagged behind expectations[1,2]

Sample of various product sustainability-related regulations



Canada

EPR: National alignment of extended producer responsibility (EPR) rules for plastics packaging, 2025 onward[28]

PFAS: Proposed restrictions under the Canadian Environmental Protection Act (CEPA), expected 2025–2026[29]

United Kingdom

EPR: Packaging EPR reporting is underway since 2025[34]

Greenwashing: Competition and Markets Authority (CMA) Green Claims Code[33] sets expectations for substantiated environmental claims

PFAS: Released PFAS Plan in 2026, a national initiative to address and minimize PFAS usage[35]

United States

EPR: EPR packaging reporting requirements started in 2025 across seven states (California, Colorado, Maine, Maryland, Minnesota, Oregon, and Washington)[31]

Greenwashing: Federal Trade Commission (FTC) Green Guides remain the main federal framework for environmental marketing claims[32]

PFAS: Reporting under the Toxic Substances Control Act (TSCA) starts in 2026; state-level product bans phase in from 2025–2030[30]

European Union

EPR: Digital Product Passport and packaging rules are being phased in through 2030[37]

Greenwashing: Unfair Commercial Practices Directive including Directive (EU) 2024/825 empowering consumers for the green transition[38]

PFAS: Broader restrictions expected from 2026 onward, including under the EU (Registration, Evaluation, Authorization, and Restriction of Chemicals) REACH framework[36]

Asia

PFAS: Regulation is expanding across major markets, including China,[39] Japan,[40] and South Korea,[41] since 2025

Source: PwC analysis

Market share is rising for sustainable products. So is the bar for proving it.

Governments in the United States, United Kingdom, and European Union are tightening guidance on environmental marketing and product disclosures. The UK and EU have introduced stricter enforcement regimes and penalties targeting misleading environmental claims. Our analysis of the Columbia Law School climate litigation database[42] revealed that litigation related to sustainability claims has remained steady since 2023, with “carbon neutral” and “net zero” product claims among the most frequently challenged.

At the same time, sustainability expectations are increasingly embedded directly into product regulation, which extend beyond decarbonization. In the US, Extended Producer Responsibility (EPR) packaging laws are active across seven states[31] and the European Union’s Ecodesign for Sustainable Products Regulation[43] is raising expectations around durability, recycled content, life cycle transparency, and end-of-life accountability.

Chemicals of concern, such as per- and polyfluoroalkyl substances (PFAS, also known as “forever chemicals”) are an increasing focus of regulation, with the EU, the US, and parts of Asia introducing restrictions, reporting requirements, and phase-outs across sectors including textiles, packaging, and electronics. Regulation is shifting toward class-based approaches and stricter disclosure and traceability—driving material and product redesign.

These forces are raising the bar for companies seeking to capture the commercial upside of sustainable products. Sustainability attributes must now be supported by credible life cycle data, transparent supply chains, and defensible approaches such as life cycle assessment and product carbon footprinting.

Companies that lack this foundation face reputational and regulatory risk. Those that build it can gain something valuable: the ability to differentiate products credibly while staying ahead of evolving regulatory expectations.

What differentiates product decarbonization leaders?

While many companies are experimenting with low-carbon product transformation, leaders are building the capabilities needed to turn sustainability into a product advantage.

1. **They move product sustainability out of the silo.** While product sustainability initiatives are often managed as isolated projects, leading companies connect it to enterprise priorities and align incentives accordingly, treating it as a cross-functional driver of revenue growth, margin enhancement, and risk reduction.
2. **They design sustainability into the product.** Leading companies embed life cycle thinking and circular design principles into R&D and development processes. Decisions on materials, performance, and durability are made with both emissions and customer outcomes in mind.
3. **They build deep supply chain transparency.** Product decarbonization depends on understanding the effects of upstream materials selection and manufacturing processes across the product life cycle. Companies with greater visibility into their supply chains and stronger supplier engagement are better positioned to quantify product impacts and identify opportunities for design improvements.
4. **They invest in the data quality to demonstrate impact.** Consistently reliable product, manufacturing, and sales data, supplemented by life cycle assessments, product carbon footprints, environmental product declarations, and traceability tools, allow companies to quantify emissions, identify hotspots, and credibly demonstrate impact.
5. **They build the commercial muscle to deliver.** Leading companies equip their sales teams with clear, data-backed value propositions that translate decarbonization into business value for customers often in the form of energy and waste cost savings, regulatory compliance, reduced emissions, and improved reporting. In B2B markets especially, decarbonization becomes a competitive asset when organizations can show how it helps customers cut costs, improve margins and meet their own sustainability commitments.

Taken together, these capabilities move product sustainability beyond branding. They turn it into something more durable: a driver of innovation, differentiation, and long-term competitiveness.

05

Translating AI into decarbonization impact

AI as a catalyst for decarbonization

The AI paradox

Artificial intelligence has the potential to reshape every major business process. It is also reshaping the sustainability landscape, but not in the way most companies assume.

The conventional framing treats AI and sustainability as a paradox: AI drives energy demand up while offering tools to bring emissions down. The International Energy Agency estimates that data centers consumed roughly 415 TWh of electricity in 2024, about 1.5% of global electricity demand, and consumption could more than double by 2030[44] as AI deployment expands. This increases competition for electrons from all sources, renewable and fossil-derived, and is contributing to increased electricity costs. On the other hand, AI offers powerful tools to enable emissions reductions. From advancing industrial processes to optimizing building energy use and improving logistics efficiency, AI can identify inefficiencies and augment decisions at a scale and speed that was previously impossible.

But the paradox framing understates what has actually changed. The AI capability frontier has moved more in the past 18 months than in the prior decade, and the gap between what is now possible and what companies are actually doing is the defining sustainability opportunity of this moment.

The capability frontier has leapt forward

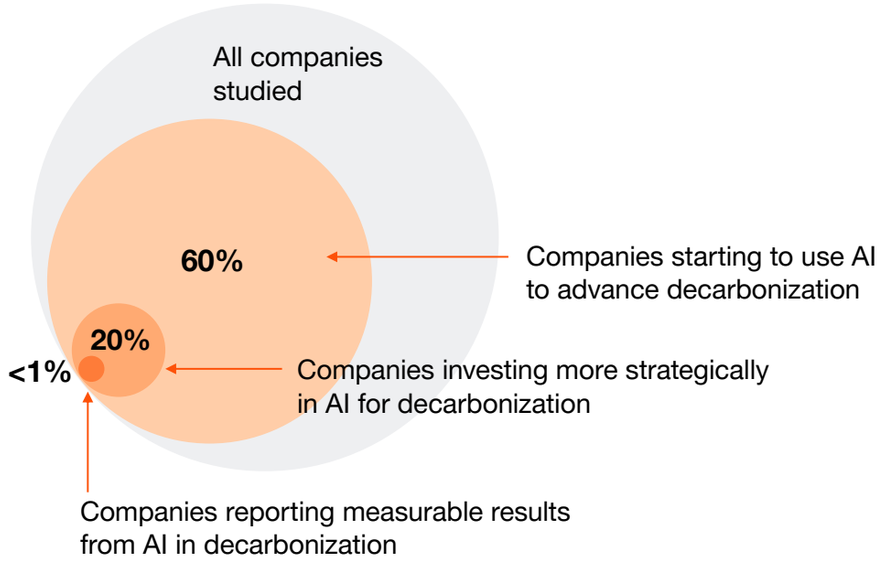
Many companies are beginning to experiment with AI as part of their decarbonization strategies. Yet corporate practices remain anchored in the first generation. Our analysis sets a clear baseline: 60% report using AI for operational decarbonization,[5] but most applications remain first-generation machine learning, such as process optimization, energy monitoring, and predictive maintenance, rather than the more advanced capabilities now possible.

Today's AI can verify emissions at scale, map environmental change in high resolution, and generate climate forecasts in minutes. Yet only one in five companies strategically use next-generation AI for decarbonization, and fewer than 1% have quantified emissions reductions from AI initiatives.[5]

This signals a deeper capability gap: most sustainability teams lack the data infrastructure, measurement frameworks, and cross-functional authority to link AI deployments to emissions outcomes.

Adoption is accelerating, but the gap between practice and frontier capability is widening. That gap is where the opportunity lies.

Current state of companies leveraging AI for decarbonization

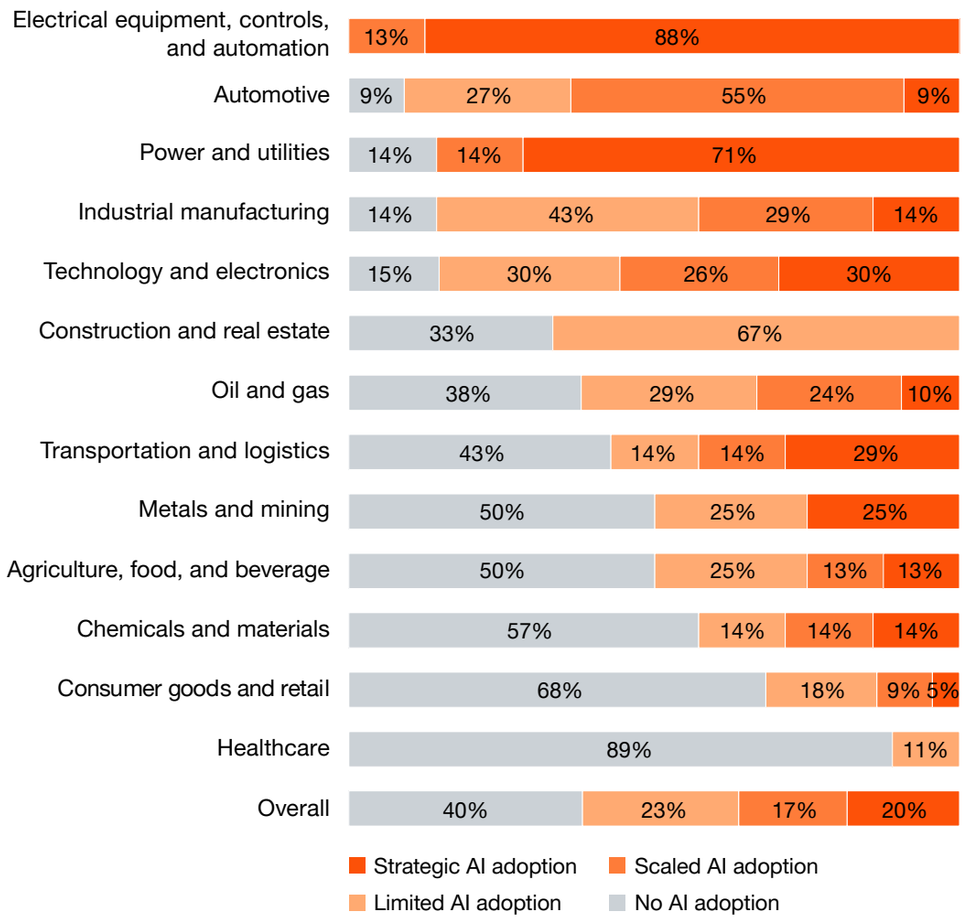


Source: PwC analysis based on companies' public data (as of August 2025)

60%

of companies report some AI adoption for operational decarbonization, but only one in five is using frontier AI technologies strategically for sustainability

Adoption of AI for operational decarbonization by sector



Individual values may not sum to the total due to rounding.

Strategic AI adoption: AI is deployed as a strategic, enterprise-level program with 3 or more use cases spanning operations and/or the value chain and is clearly linked to business strategy or decarbonization goals.

Scaled AI adoption: AI is deployed beyond the pilot stage across 2–3 use cases related to operational efficiency, energy/resource optimization, or decarbonization, owing evidence of broader implementation.

Limited AI adoption: AI is used in 1 use case only, typically as an early-stage pilot, isolated deployment, or narrowly scoped application with limited evidence of scale.

Source: PwC analysis based on companies' public data

Where AI is delivering value now

AI adoption is not evenly distributed across sectors.

Utilities and electrical equipment companies are deploying AI to advance grid performance, forecast renewable generation, and manage energy demand. Industrial manufacturers are applying AI in smart factories to reduce energy use, improve process efficiency, and minimize waste. Transportation and logistics companies are using AI to improve routing and fleet utilization, reducing both fuel consumption and operating costs. Technology companies are applying AI to data center energy management, improving cooling efficiency and hardware utilization.

Across these sectors, AI is delivering the greatest decarbonization value where companies have direct operational control and rich streams of real-time data.

By contrast, sectors such as healthcare, chemicals and materials, and consumer goods and retail show limited adoption, indicating substantial untapped potential where complex value chain decarbonization opportunities exist, but limited upstream visibility can inhibit companies' ability to impactfully deploy AI to reduce emissions. Overall, the pattern suggests that sectors that operate complex physical systems and generate large volumes of operational data are the most advanced in their adoption of AI while others still face a more gradual adoption curve.

Build it in or bolt it on

The biggest AI-sustainability opportunity may be how AI itself is built.

As companies deploy AI across core business functions, most systems are being built without sustainability as a native input. It shows up, if at all, after decisions are made—when options are already limited and costs are locked in.

Companies that embed sustainability intelligence at design stage—using emissions, energy, carbon pricing, and incentive data to guide decisions—will make faster, better-informed decisions avoiding sourcing choices that become uneconomic under carbon pricing, capturing incentives when capital is deployed, and managing energy costs alongside emissions. Those that wait will face the cost of retrofitting systems already in production.

This is a near-term architecture decision. As companies build agentic AI processes over the next 12–18 months, sustainability intelligence either gets wired in now or bolted on later. Getting it right requires the underlying data—accurate emissions, carbon price signals, climate risk scores, regulatory flags—accessible in real time to any system that needs it.

The overlooked opportunity—fixing the data problem

For all the focus on advanced AI use cases, the biggest near-term opportunity is more fundamental: addressing sustainability data challenges.

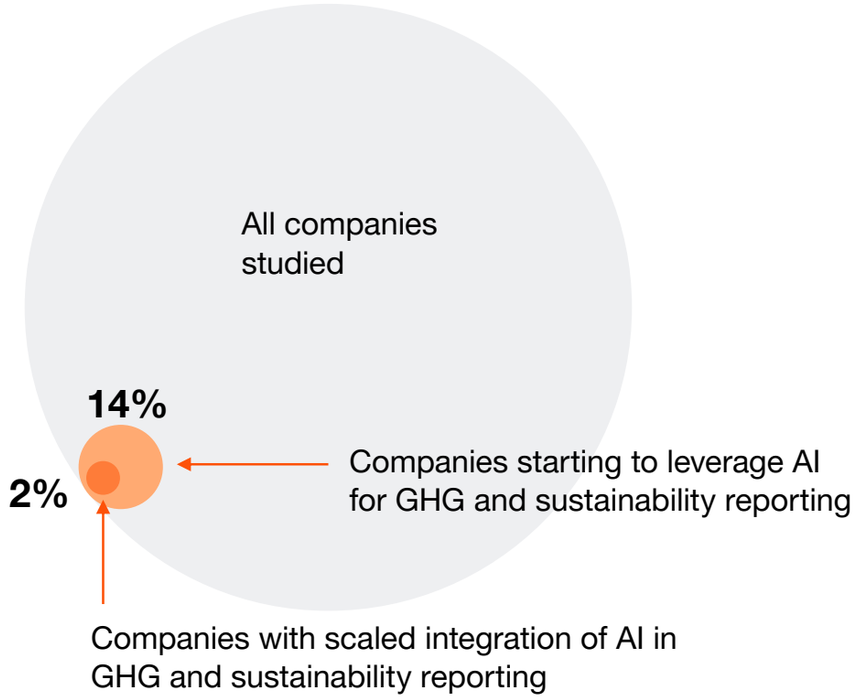
Many companies still struggle with fragmented emissions data, manual reporting processes, and limited visibility beyond their own operations. This constrains both decision making and disclosure quality. AI tools can automate data collection, analyze large volumes of supplier and operational information, improve the accuracy and efficiency of greenhouse gas inventories, and screen for inconsistencies across data sources.

Yet, as of August 2025, only about 14% of companies publicly report using AI to improve sustainability or emissions reporting, despite data quality being the biggest constraint on progress.[5]

That gap is becoming harder to defend. As regulatory expectations around climate disclosure continue to rise, emissions data is no longer confined to annual reports; it is increasingly observable, verifiable, and comparable across companies. Investors can triangulate reported numbers against independent, high-frequency datasets. Discrepancies will not stay hidden.

This shifts the role of sustainability data from compliance exercise to performance signal—one that will become more pronounced as investors, regulators, and companies place greater weight on verifiable emissions information. Companies that build AI-enabled measurement systems now can reduce reporting burden, strengthen disclosure integrity, and move from estimates to evidence.

Companies adopting AI for GHG and sustainability reporting



Source: PwC analysis based on companies' public data (as of August 2025)

2% **of companies publicly report integrating AI at scale to support more efficient sustainability and GHG emissions reporting[5]**

What sets AI decarbonization leaders apart?

As companies experiment with AI, leaders are standing out through greater discipline and strategic focus in how they apply it.

1. **They focus on operational impact first.** Rather than chasing experimental use cases, leading companies prioritize applications of reliable data that often pertain to energy use, production efficiency, and logistics performance.

2. **They wire sustainability into AI systems at the design stage.** Instead of layering it in after decisions are made, they embed emissions, energy, and cost considerations directly into models and decision logic.

3. **They measure emissions outcomes.** AI initiatives are evaluated not only by productivity gains, but by their ability to deliver measurable energy savings or emissions reductions.

4. **They use AI to solve data challenges.** By automating emissions data management and performance tracking, companies improve the accuracy of disclosures while generating the visibility needed to support operational improvements.

Among leading companies, AI is becoming a practical tool for improving operational efficiency, strengthening climate data systems, and accelerating measurable decarbonization progress.

06

Looking ahead

Looking ahead—Don't bet on one future. Build for all of them.

In a rapidly changing world, yesterday's trendline is an unreliable forecast. Assumptions change. Volatility shows up where there used to be none. Extreme weather can cripple assets and operations. Energy demand can spike in places you didn't model. The next decade of decarbonization won't feel like a straight line. It will feel like a sequence of forks in the road. In that environment, the smartest question isn't "What happened last year?" It's better to ask, "What will hold up over the next five to ten years?" and "How can the business be resilient when conditions inevitably change?"

That's why sustainability is being reframed in financial terms. Taken together, the findings show: sharper capital allocation is driving better outcomes, energy is now a board-level strategic priority, supply chains are a competitive unlock, product sustainability is emerging as a growth engine, and AI holds tremendous promise in enabling decarbonization. But knowing where value sits is only half the equation. What separates leaders from the rest is how they execute.

That's where the five observations in this report come in. These aren't isolated trends. Taken together, they are interconnected forces that paint a clear picture of what is on the horizon. We fully expect these trends to strengthen. Here's a look at how they could shape sustainability strategies over the next few years:

- **Shifting from ambition to disciplined execution:** Companies are in for a reality check as they enter a pivotal inflection point for corporate decarbonization. A wave of organizations will soon have to revalidate their targets, driven by converging regulatory, framework, and market pressures. While commitments should persist, this process will demand far more analytical rigor than the first time around and may require changes to previously approved targets. In this regulatory environment, execution and progress will continue to be more important than ambition alone.
- **Achieving energy resilience through sharper capital allocation:** As AI-related demand puts upward pressure on electricity prices, easy decarbonization tailwinds will fade. Companies will be more disciplined with how transition investments are structured, including shifting from CapEx-heavy approaches to energy-as-a-service models, baking transition costs into capital planning early, and aligning investments with core strategy.
- **Derisking supply chains:** Many companies are operating with limited visibility where it matters most. Just 18% are consistently tracking supplier activities and emissions beyond tier 1. While supplier engagement can enable Scope 3 emissions reductions and resilience for companies with complex supply chains, high-impact sources often sit outside an organization's line of sight. Leaders are gaining competitive advantages by mapping supply networks, prioritizing engagement with high-impact suppliers, and establishing incentives and accountability to support their performance. AI tools will help organizations turn engagement from a reporting exercise into an operational strategy that reduces both emissions and exposure to disruption.
- **Designing decarbonization into products:** Product design is a powerful lever for reducing emissions and will continue to drive revenue growth in the coming years. Robust product impact data and certifications will play an important role as consumers shift to using agentic commerce for product selection and purchasing decisions. As agentic commerce and demand for sustainability shape customer behavior, making your product catalog and attributes accessible to AI systems will be as important as investments in circular design, materials selection, and functionality.
- **Translating AI into emissions impact:** Only 14% of companies report using AI to improve sustainability and emissions reporting. Going forward, failure to do so will be impossible to defend. AI will shift sustainability data from a compliance exercise to a performance signal, one that will be more pronounced as investors, regulators, and companies place greater weight on verifiable emissions information. Companies that integrate AI into sustainability will reduce reporting burdens, automate emissions tracking, detect supply chain risks earlier and turn this data into a foundation for faster, better-informed decisions.

Future success will demand strategic investment discipline, laser-focused execution, and clear stakeholder communication as expectations for measurable progress intensify. Companies that build this integrated capability can turn uncertainty into advantage while competitors buckle under mounting performance pressure.

The path forward

The practical implications are straightforward: build a strategy that performs across scenarios where transition pressures, physical asset risks, supply chain constraints, and policy signals don't move in sync. Leading companies are deploying capital more efficiently, managing their products and their supply chains more effectively, and taking various no-regrets actions that translate into revenue growth, margin improvement, and risk reduction. These moves make the organization more investable. Those actions include:

Drive revenue growth

- Redesign products to use fewer, lighter, or alternative materials.
- Embrace a circular business model that focuses on recyclability and modularity.
- Communicate credible and transparent sustainable product claims.

Outcome: Products with authentic sustainability attributes are becoming a growth engine, commanding 6% to 25%+ revenue uplift over conventional alternatives.[6,7,8,9,10] At the same time, resource-smart product design can help insulate margins from raw material price swings, supply shortages, and tariff escalation.

Improve margins

- Invest in high-impact energy efficiency innovations such as smart buildings and process optimization.
- Enhance energy management and load shifting, reducing peak demand charges.
- Use AI to detect inefficiencies, optimize equipment, anticipate maintenance requirements, and enhance material sourcing and resource efficiency.

Outcome: Every unit of excess energy and raw materials eliminated is a unit permanently removed from exposure to price volatility, grid instability, and carbon pricing exposure. That supports more stable margins and cash flows.

Reduce risk

- Increase transparency across the value chain to avoid regulatory exposure, hidden costs, and inefficiencies.
- Engage suppliers to set clear expectations on emissions, data, and performance as scrutiny rises.
- Use AI and analytics to identify concentration risk, geopolitical exposure, climate risk, and compliance gaps early.
- Monitor external signals such as energy constraints, raw material volatility, disruptions, and evolving regulations.

Outcome: Greater visibility and alignment help buffer against operational and value chain risks while improving cost control.

The past year tested whether decarbonization would bend under pressure. It didn't. Ambition held because value held. And the companies that continue to act on that reality are turning decarbonization into a durable source of resilience, margin protection, and growth.

Methodology

Overview

The State of Decarbonization assesses how corporate climate ambitions changed in 2025 compared to previous years, how companies are tracking against their climate targets, and how strategies, initiatives, and behaviors are evolving on the key topics of supply chain engagement, product sustainability, energy resilience, and use of AI for decarbonization.

Our research drew on data from the 2025 CDP disclosure cycle (June 18th to November 19th), company sustainability, CSRD, and 10-K reports, S&P Capital IQ, the Science-Based Targets initiative, and various public sources of information such as company websites and press coverage. These sources were accessed from December 2025 to March 2026.

Expanding our understanding with AI

The analysis leveraged artificial intelligence to analyze and compare company reports, supplier codes of conduct, product carbon footprint documents, press releases and posts, and other media. Collectively, these AI-enabled insights help us to better understand how companies' strategies and behaviors correlate to and support climate ambition and execution against publicly committed targets.

Assessing change in company ambitions

To assess whether a company was increasing, decreasing, or maintaining its climate ambitions, we compared CDP submissions from 2023, 2024, and 2025. We considered the entirety of each company's targeted reductions and the pace of those reductions across Scopes 1, 2, and 3. Companies found to be targeting greater reductions were assessed as increasing ambition, while those who were targeting lesser reductions were assessed as decreasing ambition.

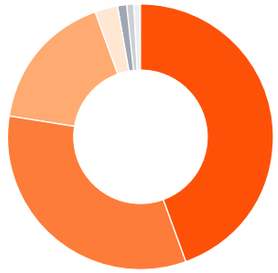
For instance, a company could have been deemed as increasing ambition if:

- Target emission reduction percentages increased with the same target timeframe of base year and target year
- Emission reduction percentages were constant, but the target year was moved to an earlier date
- Additional emission Scopes were added, increasing the total quantity of emissions targeted for reduction

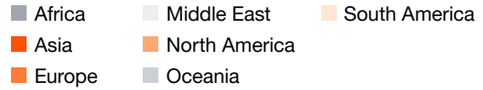
Our approach controlled for any variance in targeted reductions resulting from restatement of base year emissions.

Scope of analysis

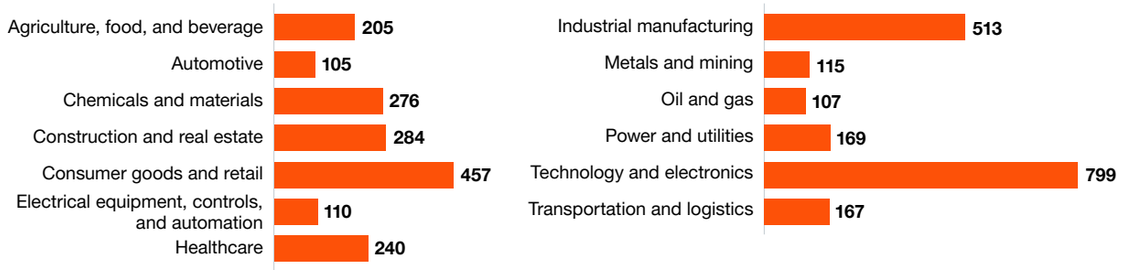
The assessment focused on 3,547 companies that provided information via CDP responses, sustainability reports, or early CSRD reports. In contrast to last year's report, our CDP sample excluded financial services and professional services companies to focus our analysis on the real economy and operational decarbonization.

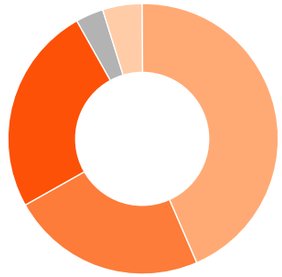


Breakdown of companies by region



Breakdown of companies by sector





Breakdown of companies by size (revenue)

Assessing progress against targets

Our process for evaluating whether a company was on track to meet its climate goals relied on each company's submissions to CDP of its absolute and intensity-based climate targets. For intensity targets, we first extrapolated and estimated their absolute emissions impact to allow for standardized comparison to absolute targets. For companies who had submitted multiple targets to the CDP, we then identified which targets were most critical to driving each company's near-term reduction goals, focusing on organization-wide targets over those with narrow operational coverage. We then calculated the pathway for each company toward its target year, assuming a linear annual reduction rate.

For our overall assessment of each company's progress in the current CDP reporting year, we compared the calculated targeted pathway value against the actual reported value, with companies deemed on-track if they were at or below their pathway and off-track if they were above it.

Assessing decarbonization practices

The research applied a combination of AI-supported and statistical methods to investigate how companies are executing on their climate ambitions across supplier engagement, product sustainability, and energy management programs and practices, as well as their use of AI to advance decarbonization.

We used tailored prompts to extract information from various sources, including:

- Company sustainability reports across 2023, 2024, and 2025
- Company CSRD reports (early responders)
- Supplier codes of conduct
- Product carbon footprint and life cycle assessment documents
- Other sources including 10-K filings, earnings call transcripts, posts/press releases, and media coverage

We then evaluated companies according to their practices on specific topics. For example, we assigned higher "supplier engagement maturity" scores to companies who showed systematic engagement with toolkits, training, and structured improvement plans. We also assigned separate "incentive/consequence" scores based on the rigor, granularity, and magnitude of mechanisms rewarding or penalizing suppliers for sustainability performance.

Lastly, we examined the relationships between these AI-driven qualitative scores and quantitative and categorical data points, including CDP, S&P CapIQ metrics (market capitalization, revenue, and EBITDA), and the ambition and progress assessments.

Sources

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PwC's Third Annual State of Decarbonization Report

The business case for decarbonization has strengthened. Leaders are proving sustainability action improves margins, growth, and resilience.

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