

Three quarters of organizations say they need climate tech to achieve net zero goals but lower costs are essential for widespread adoption

High green premiums mean that further investment and regulation are required to ensure cleaner products and services are commercially viable

Paris, December 13, 2023 – Many of the technologies able to address climate change are already available and will play a critical role in helping businesses reduce greenhouse gas emissions. That is according to the [Capgemini](#) Research Institute’s latest report “[Climate Tech: Harnessing the power of technology for a sustainable future](#)”, which found that three quarters of organizations say they will not achieve their sustainability goals without climate tech. However, close to eight in ten (77%) executives suggest that product costs are likely to increase due to the green premium attached to these technologies and they are unwilling to pay this markup.

Expectations are high for climate technology to contribute to decarbonization

Growth in key climate technologies, including renewable power and electric vehicles (EVs), has helped accelerate decarbonization efforts around the world. Other climate technologies such as low-carbon hydrogen, carbon capture and alternative fuels are becoming available and, if scaled, could help businesses achieve their sustainability goals. According to the report, executives expect climate tech to contribute to 37% (on average) of their organization’s decarbonization or net zero goals, and 65% of organizations plan to increase investment in climate technology in the next two years. For example, two thirds of steel companies view low-carbon hydrogen and carbon capture as a priority. The top drivers for this increased investment are awareness of the worsening climate crisis, stricter regulation, and increased maturity of climate technologies.

The green premium is a major barrier to adoption

While climate tech is critical for decarbonization, it comes at a price. Close to eight in ten (77%) executives suggest that their product costs are likely to increase due to investment in climate technologies. This increase in costs can be attributed to a number of factors including higher R&D, capital, and operating costs, as well as the cost of adapting manufacturing processes. The research reveals that organizations are willing to accept an average increase in product cost due to climate tech adoption (the “green premium”) of around 9%. However, the existing green premium for many clean products is typically significantly higher than this. For example, cost of low-carbon cement produced using carbon capture is estimated to be 75–140% higher than conventional cement, and sustainable aviation fuel (SAF) is estimated to cost 123% more than conventional jet fuel. As a result, climate technologies cannot currently help create cleaner products and services in commercially viable way.

Pockets of rapid progress

Despite the challenges, there are pockets of rapid scale up in climate tech adoption. These include technologies where green premiums have fallen significantly, such as solar photovoltaic (PV) and electric vehicles (EVs), as well as technologies where green premiums are still high, such as carbon capture for cement, green hydrogen for steel, and SAF for aviation. Executives in these industries expect adoption of



the technology to spread rapidly: within three years for EVs in the automotive industry, within four years for solar PV in the energy and utilities sector; within three years for SAF in the aviation industry; and within two years for carbon capture in the cement industry.

"As the world races to find solutions to address climate change, we can see there is an extraordinary appetite for these technologies, supported by an increased awareness on the urgency to act", said Florent Andrillon, Global Head of Climate Tech at Capgemini. "We are in the beginning of a "Clean Industrial Revolution". Public support and private funding have started to ignite the green investment wave, but accelerating the scale up of these solutions will require further capex investments, cost reductions and business model innovation. Before climate technologies reach cost parity with their traditional counterparts, businesses or consumers can't be expected to handle large green premiums alone. Public policies need to level the playing field and adequately support the scaling up. For example, the spectacular uptick in electric vehicle adoption has a lot to do with public subsidies and various local incentives and regulations. Consumers and organizations alike understand the need to quickly adapt their behaviors, and that solutions exist. It will take increased intervention from governments to support and speed up that paradigm shift for industry and end-users alike."

Addressing the investment gap

The research also found that on average, organizations plan to increase investment in climate tech by 7.7% in the next two years. However, average annual investment in environmental sustainability initiatives and practices across industries represented only 0.92% of total revenue in 2023, a proposition which stayed flat since last year¹. In absolute terms, it means that the current investment in environmental sustainability of the top 2,000 largest companies globally represents less than \$500 bn per year overall. This is a small portion of the \$1.8 trillion of estimated global investment in clean energy in 2023, and far below the \$4.5 trillion a year required in the early 2030s, for the energy sector to achieve net zero emissions by 2050, according to the IEA.²

Venture capital funding and financial institutions are already filling some of the gap, and should play a critical role in scaling climate tech. The report finds that 37% of surveyed VCs plan to increase investment in climate tech in 2023, with this proportion rising to 48% for 2024 and 56% for 2025. In addition, close to half (47%) of asset-management firms and banks planned to increase climate tech financing in 2023, with nearly as many (46%) planning to do so in 2024, growing to 53% in 2025. This increased investment will be focused on EVs (for 55% of them) as well as decarbonization software (45%), biofuels (36%) or nuclear (33%).

To access the full report: <https://www.capgemini.com/insights/research-library/climate-tech-research>

Methodology

For this report, the Capgemini Research Institute surveyed 1,350 senior executives (director-level and above) from large organizations (~90% of which had annual revenue above USD 1 billion) that have plans to decarbonize or reach net zero, and a survey of 500 large VCs and financial services organizations on their climate tech financing plans. In addition, the research team interviewed more than 15 experts across industries, including VCs. The global survey took place in August and September 2023 and covered 13 countries in North America, Europe, and Asia-Pacific (US, UK, France, Germany, Italy, Spain, Netherlands, Sweden, India, Singapore, Australia, Japan and China) across 16 industries.

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¹ Capgemini Research Institute, "[A World in Balance 2023: Heightened Sustainability Awareness Yet Lagging Actions](#)," November 2023

² International Energy Agency, "[Executive summary - Net Zero Roadmap](#)," 2023 update



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