PitchBook
a Morningstar company

EMERGING TECH RESEARCH

Climate Tech VC Trends

VC activity across the climate tech ecosystem

Q4
2025

REPORT PREVIEW
The full report is available through the PitchBook Platform.

Contents

Institutional Research Group

John MacDonagh
Senior Research Analyst, Climate Tech
john.macdonagh@pitchbook.com

pbinstitutionalresearch@pitchbook.com

Published on February 5, 2026

Climate tech landscape

1. Built environment
2. Carbon tech
3. Clean fuels
4. Dispatchable energy sources
5. Grid infrastructure
6. Industry
7. Intermittent renewable energy
8. Land use
9. Low-carbon mobility
10. Sustainable food

For the complete climate tech taxonomy and company list, click here to see the market map on the PitchBook Platform.

Quarterly analysis

Key takeaways

- **VC deal value in climate tech followed similar trends to global VC's broader cycle, but with a more gradual decline.** Climate tech VC deal value was essentially flat YoY in 2025, declining just 1.4% from $42.8 billion to $42.2 billion, and was down 28.5% from 2021—a smaller drop than the 31.9% decline for global VC. Deal value strengthened throughout the year, rising 39.2% from Q1 to $12.6 billion in Q4, despite US policy and support uncertainty.

- **Deal count declined steadily.** Deal count fell to a five-year low of 2,130 in 2025, with quarterly counts declining throughout the year. Fewer deals and stable deal value pushed medians up in 2025, with the median deal size reaching $6.7 million (up from $4.5 million in 2024) and the median pre-money valuation rising to $25 million (up from $17.5 million in 2024). Pre-seed/seed and early-stage deal counts saw the most significant declines.

- **North America's share of deal value surged, and late-stage VC remains the largest component of deal value.** North America accounted for 56.6% of 2025 deal value (compared with Europe's 23.1% and Asia's 16.7%) and has averaged 46.8% of the total since 2020. By stage, late-stage VC has been leading deal value, averaging 45.9% of annual totals from 2020 to 2025, followed by early-stage VC and venture growth at 26.3% and 23%, respectively.

- **Deal value is shifting to different segments, focusing on dispatchable clean energy sources and resilience.** In 2025, low-carbon mobility led with $7.7 billion across 224 deals, while dispatchable energy sources—including nuclear and geothermal energy—ranked second at $6.7 billion from just 124 deals. Clean fuels lagged at $2.1 billion, facing cost and hydrogen-support headwinds. In Q4 2025, the built environment and grid infrastructure segments led in deal value at $2.3 billion and $2.2 billion, respectively, reflecting a shift toward resilience and cost reduction.

Our coverage of the climate tech space is changing: Starting with this report, we will release quarterly climate tech reports in place of the previous carbon & emissions tech and clean energy reports. The segmentation and underlying data for the new climate tech coverage effectively combine those of the previous verticals, also adding climate-relevant content in the mobility and foodtech spaces, similar to the approach in our annual notes on the whole climate tech space. Combining the carbon & emissions tech and clean energy spaces provides a clearer picture of broader trends across the climate tech space while still permitting analysis of the same segments and subsegments within the previous verticals.

VC activity

Overall VC deal activity

In 2025, $42.2 billion in VC deal value was invested in climate tech, essentially flat compared with 2024's $42.8 billion—a decline of only 1.4%. Comparing trends in the climate tech space to global VC trends, there are some similarities and some differences:

- Both show sharp growth in VC deal value to a peak in 2021, with deal value approximately doubling from 2020 to 2021.

QUARTERLY ANALYSIS

- Following this increase, both climate tech and global VC show a roughly 30% decline in deal value from 2021 to 2025. VC deal value in the climate tech space declined 28.5% from 2021 to 2025, while global VC deal value declined 31.9% over the same period.

- The climate tech space differs from global VC in that the decline in deal value between 2021 and 2025 was more gradual, with most of the decline spread between 2022 and 2024. By contrast, global VC deal value shows a sharper decline from 2021 to 2023, followed by a recovery from 2023 to 2025.

Climate tech VC deal value stayed flat from 2024 to 2025 despite policy uncertainty in the US. Quarterly deal value strengthened throughout the year, with Q4's $12.6 billion in deal value 39.2% higher than Q1's $9.1 billion and roughly on par with the deal value in Q4 2024.

Deal count trends are very different. After remaining high and relatively flat from 2021 to 2023, peaking at 3,264 in 2023, deal count in the climate tech space fell 11% to 2,906 in 2024 and then declined a further 26.7% to a five-year low of 2,130 in 2025. 2025 also represented a five-year low for global VC deal count, though this was part of a steadier decline from 2021 to 2025. As climate tech deal value grew through each quarter of 2025, deal count fell, continuing a steady decline that began in Q4 2023. Since then, only one quarter has recorded a sequential uptick in deal count, and Q4 2025's deal count was less than half of Q4 2023's level. The relatively stable deal value and falling deal count show deal value concentrating around fewer companies and deal counts declining strongly for pre-seed/seed and early-stage VC.

Deal sizes and valuations

In 2025, medians continued to climb as fewer deals accounted for relatively stable deal value. The median deal size reached $6.7 million, a new high for the space and up from $4.5 million in 2024, extending a generally steady rise from $2 million in 2019. The median pre-money valuation rose to $25 million in 2025 from $17.5 million in 2024, continuing an upward trend from $8.4 million in 2018. Overall, the decline in deal count has outpaced the decline in deal value, increasing medians in the space.

Region and stage trends

From 2020 to 2025, North America consistently accounted for the largest share of climate tech VC deal value, averaging 46.8%, with a low of 36.2% in 2023 and a high of 56.6% in 2025. In 2020, 2021, and 2025, North America represented more than half of total climate tech deal value. Asia and Europe had the next-largest shares, averaging 26.6% and 24.3% of deal value, respectively, between 2020 and 2025. In 2025 specifically, Europe had the second-largest share of deal value with 23.1% of the total, followed by Asia at 16.7%. Oceania accounted for 2.8% in 2025—the only year in which any region outside North America, Europe, and Asia exceeded 2% of the total.

Across stages, late-stage VC has historically driven the largest share of deal value, averaging 45.9% annually from 2020 to 2025. Early-stage VC averaged 26.3%, followed by venture growth at 23% and

pre-seed/seed at 4.8%. The only recent year in which early-stage VC exceeded late-stage VC by deal value was 2018, when there were 12 early-stage deals of at least $250 million (including six of at least $500 million) compared with four late-stage deals of at least $250 million (two of at least $500 million).

Key segments

Low-carbon mobility was the largest segment by deal value in 2025, with $7.6 billion across 221 deals. Five of the year's 20 largest deals came from this segment. Dispatchable energy sources (including nuclear and geothermal energy) ranked second at $6.7 billion, though the segment had the lowest annual deal count at 122, reflecting a space with relatively few companies raising large rounds. Demand from datacenter growth and commercial and industrial electrification are significant contributors to momentum for nuclear and geothermal energy sources. Clean fuels was the smallest segment by deal value at $2.1 billion across 165 deals, underscoring the current challenges in hydrogen and the high energy costs to produce certain clean hydrocarbon fuels.

Looking specifically at Q4 2025, the built environment segment led in deal value with $2.3 billion, followed by grid infrastructure ($2.2 billion) and low-carbon mobility ($2.1 billion). This aligns with the wider trend we have been observing of refocusing climate technologies toward resilience enhancement and co-benefits outside of decarbonization. All three of these segments have strong value propositions outside of reducing carbon emissions, including reducing energy-related operating costs, enhancing grid stability, and reducing exposure to volatile fuel prices.

Top deals and investors

2025 saw two deals of $1 billion or more, both occurring in Q4:

- Crusoe raised $1.4 billion in Series E funding—its largest funding round by a considerable margin. The company focuses on low-carbon datacenters and stranded energy assets.

- Base Power raised $1 billion in Series C funding in October. The company focuses on residential battery energy storage systems, which it leases to customers to be used as backup power and which can also be used to sell energy back to power grids during peak hours.

Additionally, there were several large funding rounds in the nuclear energy space in 2025, including four of the 10 largest deals of the year. The largest of these was Commonwealth Fusion Systems' $863 million Series B2, which follows on from VC funding raised in 2021 and 2022 and will be used to develop the company's "SPARC" demonstration project in addition to its "ARC" technology.[1] The other three large nuclear energy deals were raised by nuclear fission companies: two rounds by X-energy and one by TerraPower.

Unsurprisingly, sector-specialist investors have dominated activity: Climate Capital and SOSV lead by number of deals over the past seven years, and Shell Ventures is the only corporate VC firm to rank in the top 10 by deal count since 2019.

1: "Commonwealth Fusion Systems Raises $863 Million Series B2 Round to Accelerate the Commercialization of Fusion Energy," Commonwealth Fusion Systems, August 28, 2025.

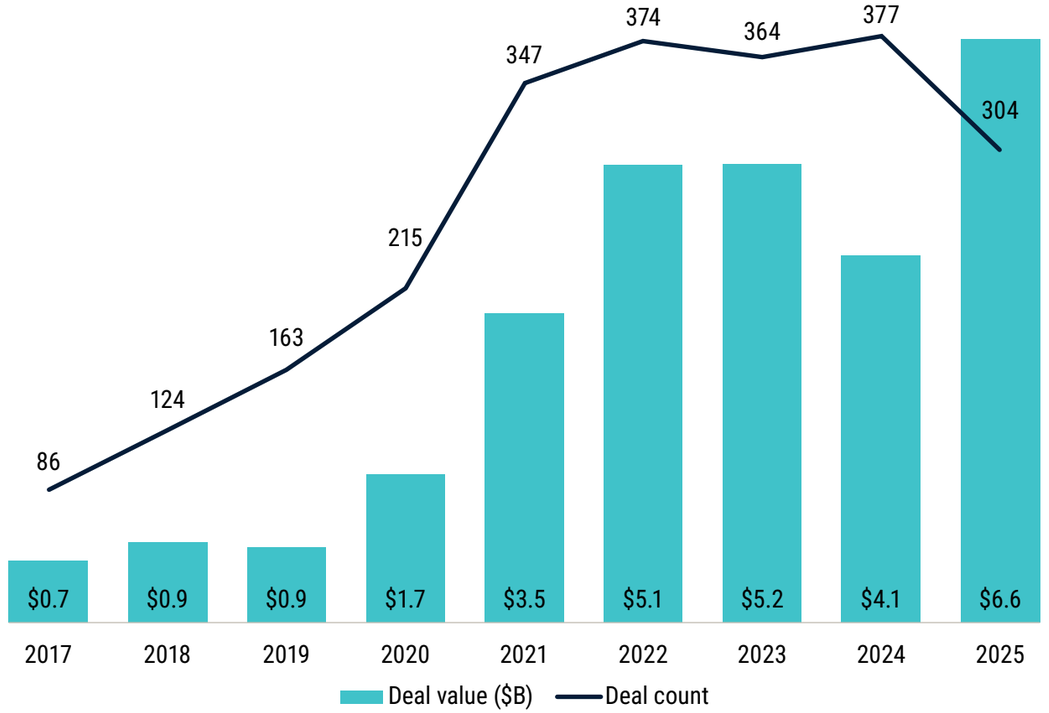
Exit activity

Annual exit activity peaked in 2021 with 128 exits totaling $102.9 billion in exit value, driven largely by exits in the electric vehicles space. The magnitude of 2021's exit value is such that pre- and post-2021 trends look muted by comparison. Despite this, 2025 represented a notable post-2021 spike, with $27.2 billion in exit value across 106 exits, exceeding the combined exit value of 2023 and 2024. Over the past eight years, public listings have accounted for the largest share of climate tech exit value, while acquisitions have consistently led by exit count, outpacing listings and buyouts in every year except 2020, when listings were more prominent. Buyouts remain a small share of both exit value and count. The largest exits of 2025 included Fermi's IPO, which raised $784.9 million, and BETA Technologies' IPO, which raised $1 billion.

AI themes

Looking specifically at AI-linked climate tech companies, 2025 represents the high-water mark for deal value, despite lower deal count than the previous four years.[2] AI technologies are being incorporated into several areas of climate tech, particularly those that deal with complex, high-resolution datasets. These are commonly found in real-time monitoring of energy production and consumption, which can incorporate high-granularity temporal data for energy use and detailed spatial data on weather and wide geographic areas. Further, AI is being applied to monitor large areas of land containing agriculture, natural resources, or real estate assets at risk from the effects of climate change.

AI climate tech VC deal activity



Source: PitchBook • Geography: Global • As of December 15, 2025

2: For deeper analysis of AI trends in the climate tech space, see our recent analyst note AI in Climate Tech.

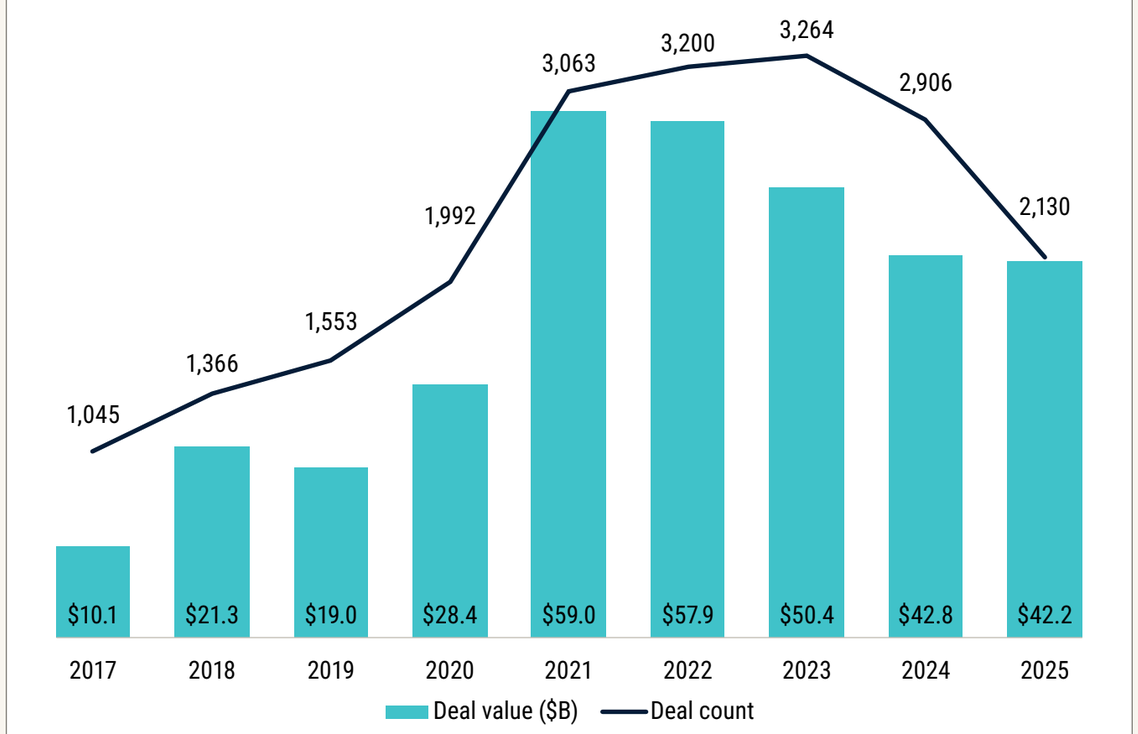
Outside of AI applications in climate technologies, we are also seeing climate technologies focused on AI's growing energy consumption, from the dual perspectives of decarbonization and operational cost reduction. These include energy efficiency technologies—many of which overlap with more established building energy efficiency technologies like high-efficiency cooling—and clean energy technologies like renewable energy and low-carbon sources like nuclear fission. Falling costs for renewable energy—coupled with the wider availability of energy storage technologies—make sources like solar and wind good candidates for supplying at least a portion of AI's energy consumption, and sources with controllable, stable outputs like geothermal energy and nuclear fission are seeing a wave of interest as a direct response to AI adoption. For the most part, these clean energy technologies are not specifically designed for datacenter applications—rather, they are suitable for a range of commercial and industrial uses, of which AI datacenters are a fast-growing segment.

Conclusions

VC investment in climate tech has declined from a peak in 2021, though this trend has also been observed in broader global VC activity—the deal value decline in climate tech is likely due in part to industry-agnostic factors affecting the VC ecosystem. Within this context, climate tech has seen comparatively stable investment levels. Although overall climate tech VC deal value was effectively flat between 2024 and 2025, this masks notable shifts in VC deal value within the space. Funding has been increasingly concentrated in segments such as dispatchable energy sources—with geothermal and nuclear energy being seen and positioned as a solution to growing datacenter requirements and industrial electrification—along with low-carbon built environment solutions, which reached record investment levels in 2025. At the same time, segments like intermittent renewable energy and clean fuels experienced a significant decline in deal value YoY, as intermittent renewable technologies are increasingly maturing outside of the VC ecosystem, and the clean fuels segment struggles with steep green premiums and changes to high-level support.

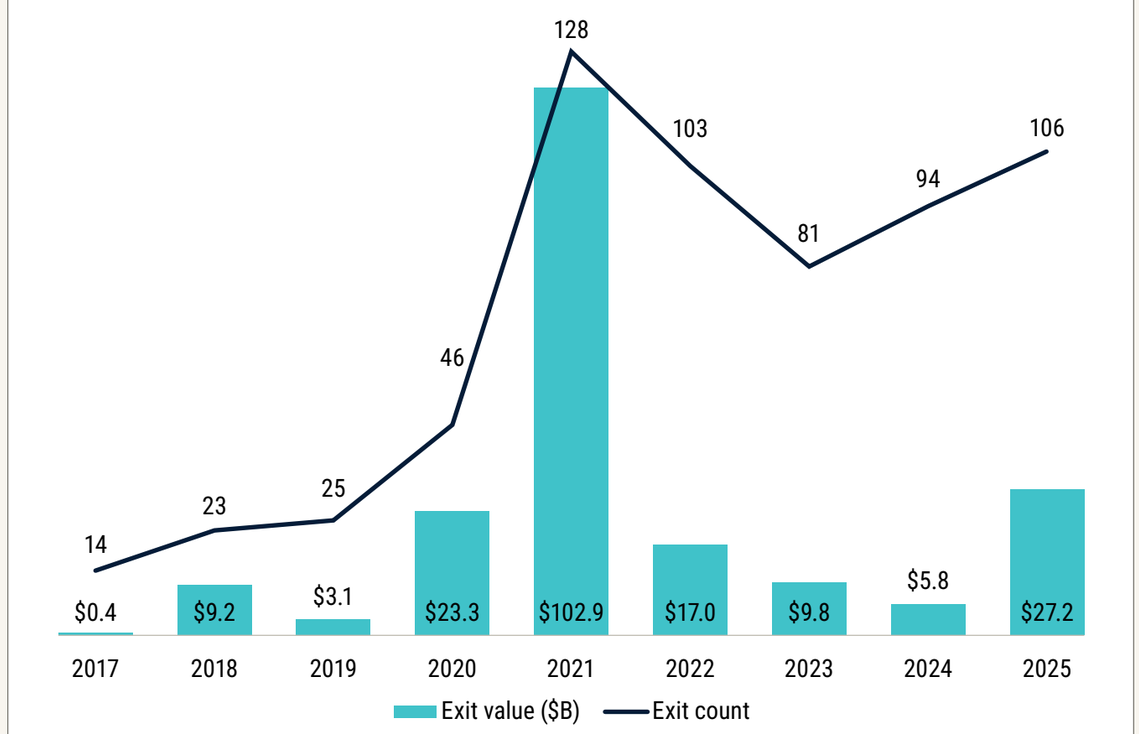
These shifts occurred during a period of significant changes to the policy environment and overall sentiment in the US, historically one of the most important geographies for climate tech VC. The change in federal priorities under the Trump administration reshaped several elements of the supportive ecosystem built during the Biden administration, reducing or discontinuing multiple programs and incentives. While some pillars of support remain in place, conditions for climate tech development and deployment in the US are weaker than in the years preceding 2025, though clarity on this shift has reduced the uncertainty investors faced in the first half of 2025.

Climate tech VC deal activity



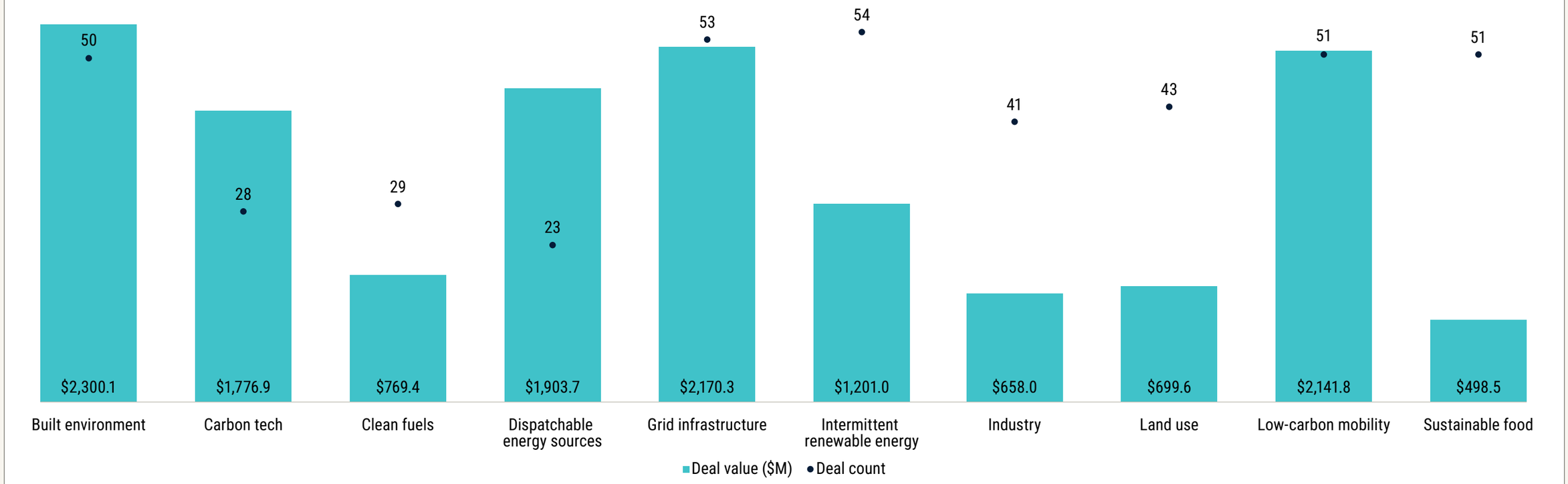
Source: PitchBook • Geography: Global • As of December 31, 2025

Climate tech VC exit activity



Source: PitchBook • Geography: Global • As of December 31, 2025

Q4 2025 climate tech VC deal activity by segment



Source: PitchBook • Geography: Global • As of December 31, 2025

Key climate tech pre-seed/seed deals in Q4 2025

Company	Close date	Segment	Subsegment	Deal value ($M)	Post-money valuation ($M)	Deal type	Lead investor(s)
Emerald AI	October 30	Grid infrastructure	Analytics & grid management	$52.2	N/A	Seed	Lowercarbon Capital, Radical Ventures
Haisida Naxing	December 4	Grid infrastructure	Lithium batteries	$18.9	N/A	Seed	N/A
Aka Foods	November 17	Sustainable food	Plant-based proteins	$17.2	N/A	Seed	Alex Bronstein, Michael Bronstein
Soden	October 17	Grid infrastructure	Analytics & grid management	$15.1	N/A	Seed	N/A
Voya	November 13	Grid infrastructure	Alternative energy storage	$13.0	N/A	Seed	Energy Impact Partners
Electroflow Technologies	October 2	Industry	Green mining	$12.8	$37.5	Seed	Union Square Ventures
Skye	December 17	Built environment	Building energy efficiency	$11.1	N/A	Seed	Transition Ventures
MarineLabs	October 22	Land use	Water tech	$10.5	N/A	Seed	BDC Capital
Sophia Space	December 23	Built environment	Building energy efficiency	$10.0	$40.0	Seed	N/A
Aevoloop	October 28	Industry	Recycling - polymers	$9.6	N/A	Seed	Circulate Capital

Source: PitchBook • Geography: Global • As of December 31, 2025

Key climate tech early-stage VC deals in Q4 2025

Company	Close date	Segment	Subsegment	Deal value ($M)	Post-money valuation ($M)	Deal type	Lead investor(s)
Valar Atomics	November 10	Dispatchable energy sources	Nuclear - fission	$130.0	N/A	Early-stage VC	Day One Ventures, Dream Ventures, Snowpoint Ventures
Exowatt	November 13	Intermittent renewable energy	Solar - photovoltaic	$120.0	N/A	Series A1	8090 Industries, Felicis, MVP Ventures
empact	October 27	Built environment	Building energy efficiency	$116.6	N/A	Early-stage VC	N/A
Liberation Bioindustries	December 9	Sustainable food	Fermented proteins	$112.1	$178.0	Series A	N/A
Green Energy Origin	October 12	Grid infrastructure, low-carbon mobility	EV components, lithium batteries	$110.0	N/A	Series B	BlueCrest Capital Management
Zelos Tech	October 13	Low-carbon mobility	Terrestrial/marine BEVs	$100.0	N/A	Series B	Ant Group
Antares Nuclear	December 2	Dispatchable energy sources	Nuclear - fission	$96.0	$280.0	Series B	Shine Capital
Yichu Energy	October 16	Intermittent renewable energy	Solar - photovoltaic, wind	$93.2	$210.6	Early-stage VC	N/A
Causal Labs	November 25	Land use	Climate/Earth data	$70.0	$360.0	Series A	N/A
Arbor	October 21	Clean fuels	Waste to energy/fuel	$55.0	$99.0	Series A	Lowercarbon Capital

Source: PitchBook • Geography: Global • As of December 31, 2025

Key climate tech VC exits in 2025

Company	Close date	Segment	Subsegment	Exit value ($M)	Post-money valuation ($M)	Exit type	Acquirer(s)/index
Fermi	October 1	Built environment	Building energy efficiency	$11,766.3	$12,448.8	Public listing	Nasdaq
BETA Technologies	November 4	Low-carbon mobility	Electric air vehicles	$6,594.5	$7,609.5	Public listing	New York Stock Exchange
Zenergy	April 3	Grid infrastructure	Lithium batteries	$2,539.2	$2,668.5	Public listing	Jiangsu High-Tech Investment Group, Suzhou Guofa Venture Capital
Vikram Solar	August 26	Intermittent renewable energy	Solar - photovoltaic	$1,202.4	$1,374.0	Public listing	Bombay Stock Exchange
Siete Family Foods	January 17	Sustainable food	Plant-based proteins	$1,200.0	$1,200.0	Public listing	Pepsico
Ather	May 6	Low-carbon mobility	Terrestrial/marine BEVs	$1,092.0	$1,399.4	Public listing	Bombay Stock Exchange
BRETON Technology	May 7	Low-carbon mobility	Terrestrial/marine BEVs	$850.5	$880.6	Public listing	Sunwoda Electronic
ZhiDa Tech	October 10	Low-carbon mobility	EV charging	$462.7	$514.2	Public listing	N/A
FengBei Biotech	November 5	Land use	Fertilizer alternatives	$369.9	$493.3	Public listing	China Insurance Investment, Zhangjiagang Industrial Capital Investment
Beijing HyperStrong Technology	January 27	Grid infrastructure	Lithium batteries	$353.4	$471.3	Public listing	N/A

Source: PitchBook • Geography: Global • As of December 31, 2025

Climate tech VC deal summary

	Quarterly activity					TTM activity	
	Q4 2024	Q1 2025	Q2 2025	Q3 2025	Q4 2025	Q1 2024-Q4 2024	Q1 2025-Q4 2025
Deal count	**698**	**637**	**561**	**525**	**407**	**2,906**	**2,130**
QoQ change	2.8%	-8.7%	-11.9%	-6.4%	-22.5%	N/A	-26.7%
Share of total VC	6.9%	5.8%	5.9%	5.6%	4.9%	6.8%	5.6%
Deal value ($B)	**$12.9**	**$9.1**	**$9.6**	**$10.8**	**$12.6**	**$42.8**	**$42.2**
QoQ change	44.4%	-29.3%	6.2%	12.2%	16.9%	N/A	-1.4%
Share of total VC	10.0%	6.7%	8.5%	9.0%	9.0%	10.9%	8.3%
Exit count	**27**	**30**	**26**	**22**	**28**	**94**	**106**
Public listings	17	23	18	15	14	57	70
Acquisitions	4	4	2	3	7	18	16
Buyouts	6	3	6	4	7	19	20

Source: PitchBook • Geography: Global • As of December 31, 2025

PitchBook provides actionable insights across the global capital markets.

Additional research:

Q1 2026 Analyst Note: AI in Climate Tech

Download the report here

2025 Climate Tech Funds Report

Download the report here

PitchBook Insights is an online compendium of in-depth data, news, analysis, and perspectives that shape the private capital markets.

PitchBook subscribers enjoy exclusive access to a comprehensive suite of private market insights, including proprietary research, news, data, tools, and more on the PitchBook Platform.

Nizar Tarhuni
Executive Vice President of Research and Market Intelligence

Paul Condra
Senior Director, Global Head of Private Markets Research

James Ulan
Director, Industry & Technology Research

Report created by:

John MacDonagh
Senior Research Analyst, Climate Tech

Oscar Allaway
Senior Data Analyst

Jenna O'Malley
Senior Graphic Designer

Chloe Ladwig
Graphic Designer

Learn more about PitchBook's Institutional Research team.

Click here for PitchBook's report methodologies.