Cleantech for Europe

Cleantech Group

EU CLEANTECH
Q2 2025 Briefing

With the support of

Breakthrough Energy

European Climate Foundation

WELCOME TO YOUR EU CLEANTECH QUARTERLY BRIEFING

Cleantech for Europe

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Cleantech for Europe

Time for action – Europe's make or break moment in clean industrial leadership

One year after the EU elections, Europe finds itself in a fraught political climate marked by discussions around climate targets, rising tensions with China and the US, and turbulences in global markets. Against this backdrop, it is now more than ever imperative that Europe sets itself apart with bold and strategic solutions to counter these challenges and ensure a strong, sustainable economic future for the continent.

The investment landscape of the cleantech sector in Q2 2025 paints a contrasting picture. EU cleantech venture and growth investment rebounded to €2.5 billion in the last quarter, marking the best quarter in terms of total investment amount since Q1 2024. The average deal size doubled to €24 million compared to Q1 2025, showing bigger deals coming through despite low volumes. The decline in deal volumes reflects a more conservative investment climate, with investors holding off on early-stage ventures and shifting toward safer more liquid investments amidst increased uncertainty and difficulty raising new funds.

This highlights the need for strong demand signals for clean technologies in Europe and for directing public funds in a strategic direction that leverages private capital. The upcoming Industrial Decarbonisation Accelerator Act (IDAA) represents an important opportunity for Europe to create clear and sustained demand signals through lead markets by introducing resilience, sustainability, and 'Made in Europe' criteria in public procurement and funding.

Additionally, Europe will have to take decisive action to diversify and control its supplies of Critical Raw Materials (CRMs), as underscored by the security implications of Chinese export bans on CRMs in the context of US-China rivalry. More Clean Trade and Investment Partnerships (CTIPs) and supporting innovation, manufacturing and deployment of critical cleantech that may be less dependent on CRMs will be crucial.

Echoing the need for strong local industries, in July we launched our report Scale or Fail – A Trade Strategy for Europe's Clean Industry. While Europe has become a cleantech innovation powerhouse in the last decade, we struggle at scaling these solutions and fostering industrial leadership. Our latest report outlines a bold, practical strategy to boost European competitiveness and security by strengthening local cleantech manufacturing and protecting ourselves from unfair global competition and external dependencies.

Looking back at the last quarter, the Cleantech Friendship Group hosted an event at the European Parliament on how to build Europe's industrial competitiveness by making the case for local battery cell manufacturing. The European battery industry can deliver on climate targets and create high-quality jobs, and pioneering companies are already building EU industrial capacity despite severe challenges. Moving forward, this promising industry needs to receive production support, demand certainty, and strategic trade measures to unlock its full potential.

Our summer highlight was to welcome our dear friend and cleantech veteran Jigar Shah in Brussels. We had the honour of meeting Commissioner Wopke Hoekstra to discuss opportunities for Europe in the cleantech space and valuable insights from the US Inflation Reduction Act (IRA) and the Loan Programs Office Instruments on how to attract private investors through a strategic allocation of public funds.

This happened in the context of a recently One Big Beautiful Bill Act (OBBBA) passed in the US. The fear of a total rollback of the IRA did not materialise and a more nuanced picture emerged with a repeal of support for wind and solar, but a continued focus on batteries, hydrogen, nuclear, geothermal and CRMs, all against the backdrop of security concerns.

The way forward for Europe is clear: We should not think that the US is abandoning the race for clean industrial leadership. Given also China's dominance with its state-driven approach, it is pivotal that Europe doubles down and focuses ruthlessly on putting in place a strategic set of policies announced in the Clean Industrial Deal aimed at building industrial leadership in cleantech. Europe has the potential and the capital. What markets need now is a strong sign of optimism from political leaders that we will enact the necessary reforms which are key to more competitiveness and resilience.

EXECUTIVE SUMMARY

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01 Q2 2025: EU Cleantech Investment Rebounds, With High Deal Average Despite Low Volumes

- EU cleantech venture and growth investment rebounded to €2.5 billion in Q2 2025, marking the best quarter since Q1 2024.
- US investment declined to €3.7 billion (down €0.7 billion), falling under its 2024 quarterly average of €4.4 billion. Chinese investment dropped by 60% compared to Q1, reaching €0.4 billion.
- Average deal size was €24 million, doubling from €12 million in Q1.
- EU Total deal in volume dropped from 157 to 104 deals, hitting a 7-year low.
- Early-stage deal volume (seed and Series A) fell sharply by 39%, from 133 to 81 deals.
- Late-stage deal volume (Series B and growth equity) dropped slightly, from 24 to 23 deals, marking the lowest amount since 2022.
- Cleantech VC deals took place in only 15 out of 27 EU member states in Q2 2025. Germany kept its leading position with 27 deals, followed by France (19), the Netherlands (16), Spain (12), and Sweden (8).

02 Beyond Equity: Debt Dive In EU Cleantech Funding

- EU cleantech debt investment reached €1.7 billion in Q2 2025, rising slightly from €1.6 billion in the last quarter.
- 20 debt deals were recorded (up from 12), marking a positive trend for the first time in the past four quarters, but with modest volumes.
- In contrast to the US, private investors in Europe face a fragmented credit market and a lack of de-risking instruments, lowering private investment appetite.
- The EU faces a strong need for measures capable of unlocking growth-stage debt at scale.

03 Latest EU Policy Developments

- New EIB CleantechEU Guarantee scheme approved, offering €250 million worth of counter-guarantees to commercial banks.
- Launch of the Clean Industrial State Aid Framework (CISAF), enabling Member States to deploy loans and guarantees more easily to cleantech projects, but excluding production-based support.
- EC unveiled its Startup and Scaleup Strategy, aimed at supporting innovative start-ups and scale-ups to foster European competitiveness.
- EC proposed new €2 trillion EU budget, with a new European Competitiveness Fund (ECF) channelling €450 billion in cleantech investment.
- Iberian blackout was not caused by renewables.

CHAPTER 01 :

QUARTERLY INVESTMENT DATA

01 Q2 2025: INVESTMENT REBOUNDS, WITH HIGH DEAL AVERAGE DESPITE LOW VOLUMES

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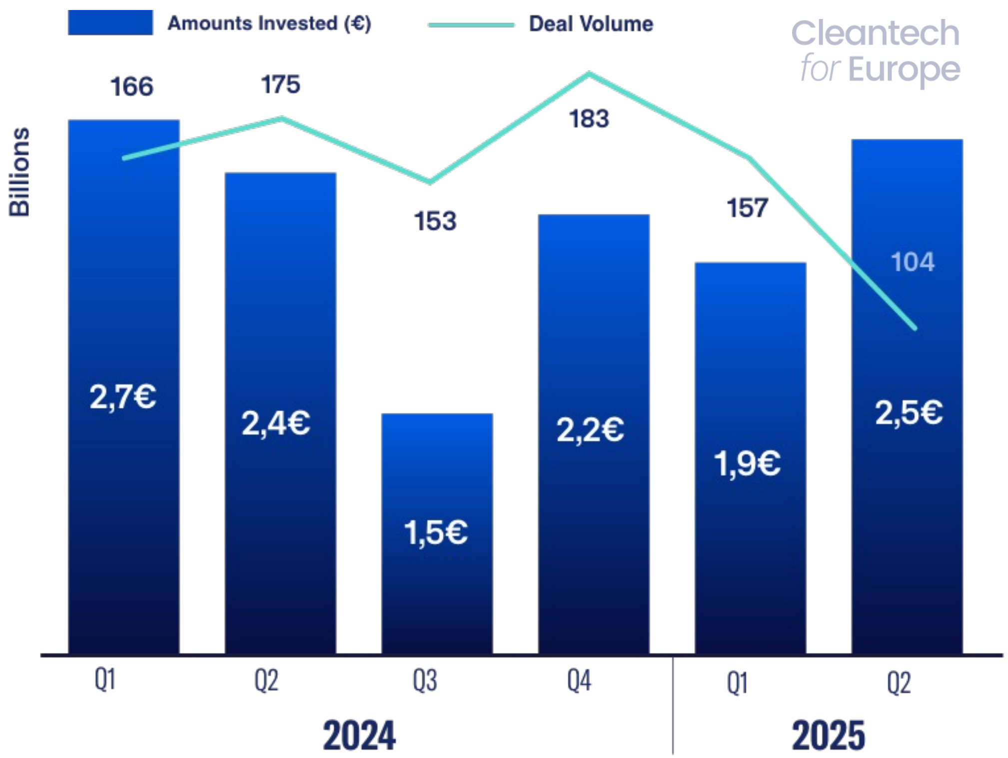
EU27 Cleantech Seed, Series A, Series B and Growth investment, 2024 – Q2 2025



€2.5 billion

INVESTED IN EU CLEANTECH IN Q2 2025

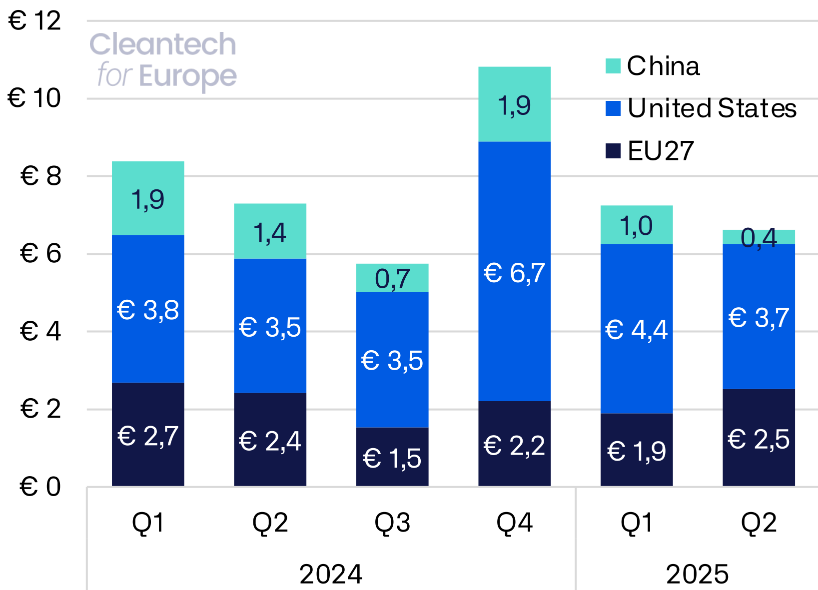
While amount invested increased, deal volume fell to 7-year low

01 Q2 2025: INVESTMENT REBOUNDS, WITH HIGH DEAL AVERAGE DESPITE LOW VOLUMES

Cleantech for Europe

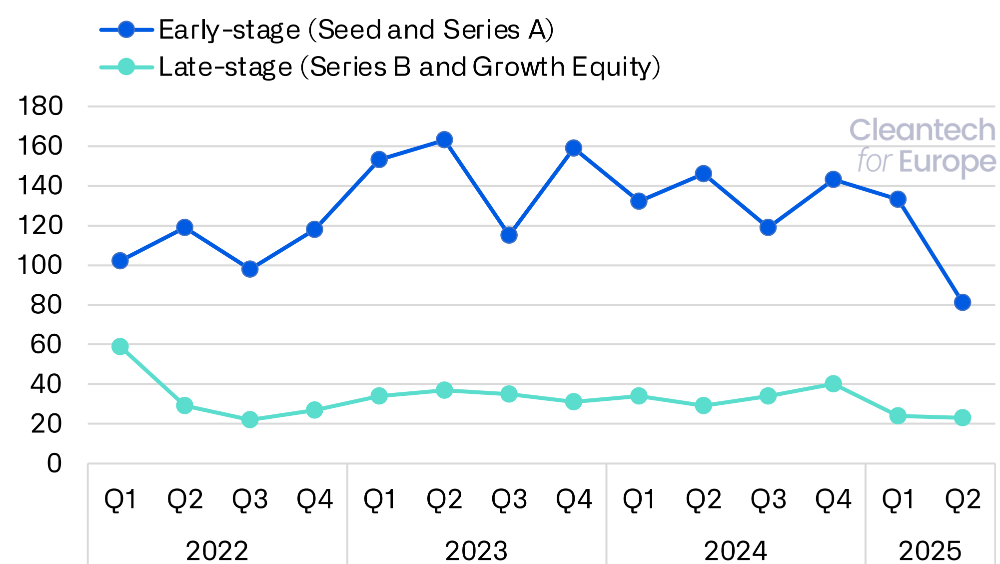
- **EU cleantech venture and growth investment rebounded to €2.5 billion in Q2 2025**, up from €1.9 billion in Q1, and above the 2024 quarterly average of €2.2 billion.
- **US investment fell to €3.7 billion**, down from €4.4 billion last quarter and now below its 2024 quarterly average of €4.4 billion. Growing uncertainty under the Trump administration continues to cast a shadow over cleantech policy and financial markets.
- **Chinese investment declined sharply to €0.4 billion**, a 60% drop from Q1, amid a broader economic slowdown – though this belies its overall strength in cleantech manufacturing and innovation. China's state-driven approach relies less on venture funding, and its opaque innovation system makes it difficult to track deals.
- **Early-stage activity dropped sharply**, with only 81 deals in Q2 – down 39% from 133 in Q1 – highlighting investor caution at the seed and Series A stages.
- **Late-stage investment remained weak**, with just 23 Series B and Growth Equity deals, down slightly from 24 in Q1, and the lowest amount since 2022.
- As a result, **total EU deal volume fell from 157 to just 104**, the lowest in since Q3 of 2018 – almost seven years ago – reflecting a more conservative investment climate as investors are holding off on early-stage ventures and shifting toward safer bets amid increased uncertainty and difficulty raising new funds.
- **Average deal size doubled**, rising from €12 million in Q1 to €24 million in Q2, driven by a handful of large rounds despite broader market softness.
- **Looking ahead, Europe faces macroeconomic uncertainty, volatile interest rates, and new trade barriers** – dampening investor confidence and prompting a 'wait and see' approach from investors. Yet with the Clean Industrial Deal taking shape, EU cleantech is increasingly viewed as a stable and strategic opportunity.

Cleantech Venture and Growth Investment by Region, 2024 – Q2 2025



Source: Cleantech Group

EU27 Cleantech Venture and Growth deals by stage, 2022 – Q2 2025



01 Q1 DEAL DISTRIBUTION: GEOGRAPHY & SECTORS

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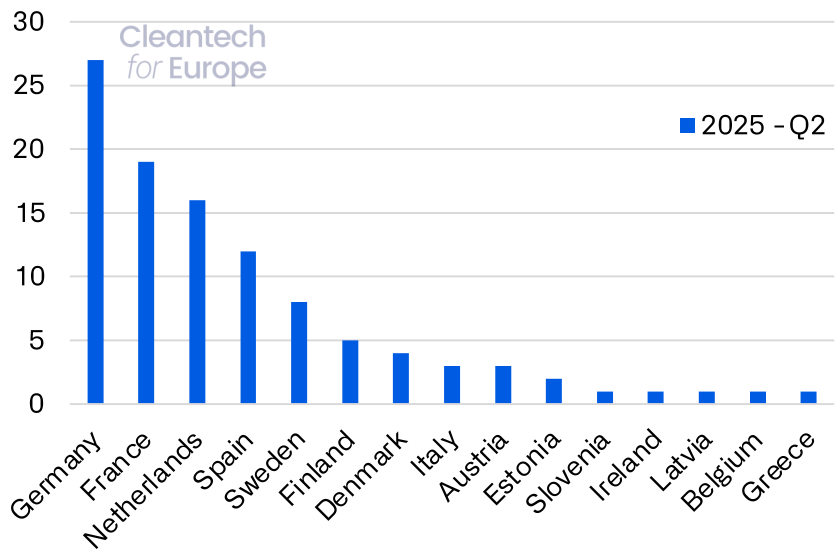
→ **Cleantech VC deals took place in just 15 of 27 EU member states in Q2 2025**, the lowest quarterly country participation since 2021.

→ **Germany remained in the lead with 27 deals**, followed by **France** (19), **the Netherlands** (16), **Spain** (12), and **Sweden** (8). Southern (excluding Spain), Central and Eastern Europe saw minimal activity, with only 3 deals in Italy and just one each in countries like Greece, Slovenia, and Latvia.

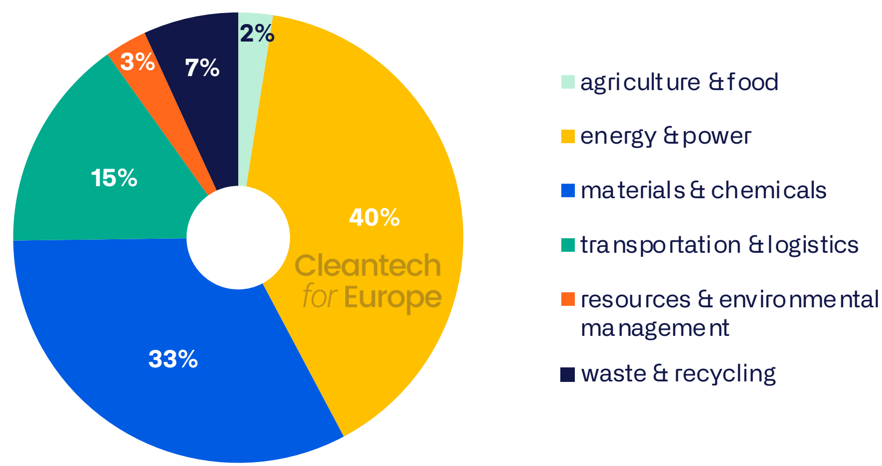
→ **Energy & Power retained its position as the dominant sector**, accounting for **40% of all Q2 venture and growth investment**. It was closely followed by **Materials & Chemicals** (33%) and **Transportation & Logistics** (15%), reflecting continued infrastructure and electrification needs.

→ **Agriculture & Food, Waste & Recycling, and Resources & Environmental Management** together made up just 13% of total investment, underscoring the concentration of capital in core industrial decarbonisation technologies.

EU cleantech venture and growth deals by member state, Q2 2025



EU cleantech venture and growth investment by sector, Q2 2025



01 EARLY-STAGE INNOVATION FUNDING HALVES FROM LAST QUARTER

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EARLY STAGE INVESTMENTS (SEED & SERIES A)

Top deals and activities

Fusion

Proxima Fusion	Germany	€130M

Batteries and Battery Storage

iwell	Netherlands	€29M
BASQUEVOLT	Spain	€10M

Food Waste

Volare	Finland	€27M

Energy

trawa.	Germany	€24M
OPTICS11	Netherlands	€17M

Textile Upcycling

eeden we start upcycling	Germany	€18M
ever dye	France	€15M

Industrial Heat

ecop	Austria	€10,5M

Solar Developer

enrise	France	€8M

LATE-STAGE INVESTMENTS (SERIES B & GROWTH EQUITY)

Top deals and activities

E-Mobility Investment Platform

neot	France	€350M

E-SAF

SKYNRG	Netherlands	€300M

Waste Management - Recycled Materials

GESTCOMPOST (Biometanización y compostaje)	Spain	€120M
FAIRMAT	France	€26M

Green Methanol

C2X	Denmark	€100M

Green Hydrogen

John Cockerill	Germany	€160M
HY2GEN	Denmark	€47M

Wind turbine maintenance

AERONES	Latvia	€52M

Wildfire Detection

ORORA Technologies	Germany	€37M

Aviation Efficiency

Expliseat	France	€37M

01 THE LATEST FROM THE CLEANTECH INVESTMENT ECOSYSTEM

Bosch Ventures BOSCH

In May, German fund Bosch Ventures, the corporate venture arm of Bosch, launched a new €250 million fund to support deep-tech startups worldwide, especially in electrification and cleantech. Since its founding in 2007, Bosch Ventures has made over 100 investments globally, reinforcing its role as a key partner in co-innovation and market-transforming technologies.

SWEN CAPITAL PARTNERS

In June, Paris-based SWEN Capital Partners announced the first closing of its SWEN Blue Ocean 2 fund at €160 million, positioning it as the world's largest impact venture fund dedicated to ocean regeneration. With a target of €300 million, the fund focuses on startups tackling overfishing, pollution, and climate change. The strategy has attracted strong interest from institutional investors, including the EIF, France 2030, Bpifrance, and Macif.

KOMPAS

In April, Copenhagen-based KOMPAS VC announced the closing of its €150 million Fund II, reinforcing its commitment to early-stage industrial tech startups. The firm is backing next-generation founders tackling key global challenges such as decarbonisation, and industrial resilience.

carbon equity

In April, Amsterdam-based Carbon Equity closed its third Climate Tech Portfolio Fund at €105 million, surpassing its minimum target. Backed by 460 private and institutional investors, the fund will support around 150 climate innovations—ranging from geothermal energy to battery technologies—via leading VC and private equity funds.

first momentum

In April, Germany-based First Momentum Ventures closed its second fund at €35 million to support early-stage B2B and deeptech startups across Europe. Specialising in pre-seed investments, the fund is backed by family offices, industrial corporates, public institutions, and fund-of-funds. The firm targets innovations in AI, computing, energy, automation, and industrial tech.

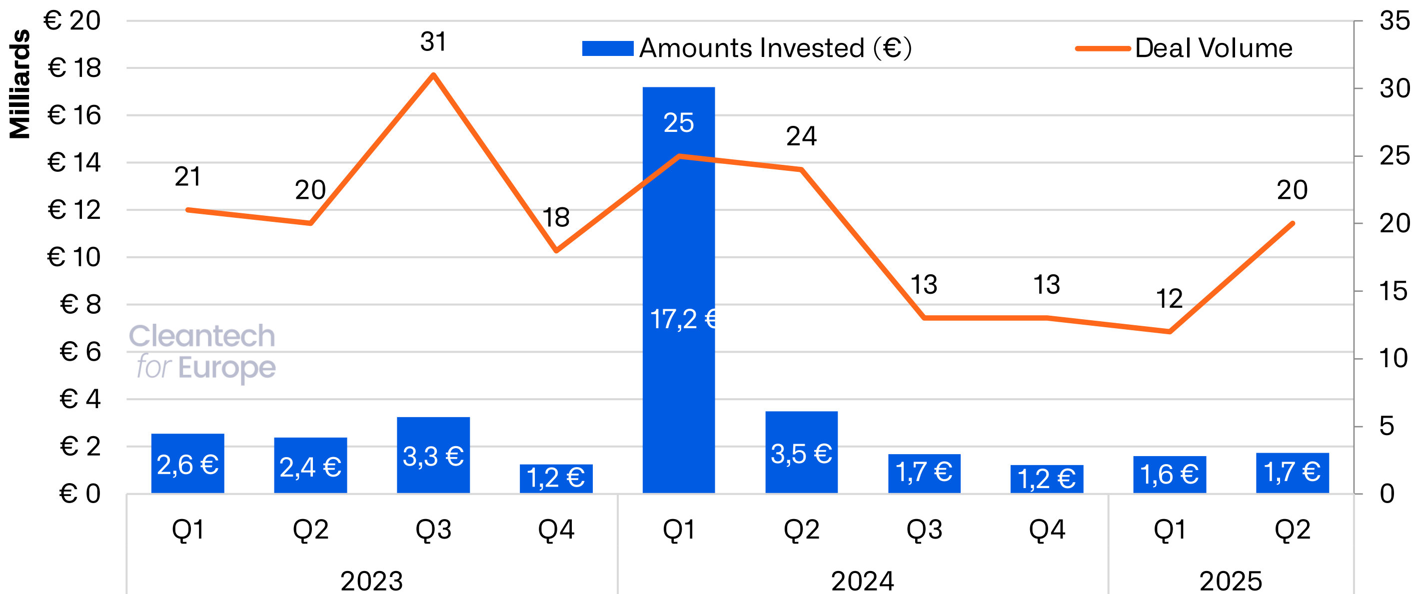
CHAPTER 02 :
BEYOND EQUITY

01 DEBT DIVE: EU CLEANTECH DEBT FUNDING

Cleantech for Europe

- → **EU cleantech debt investment rose slightly to €1.7 billion in Q2 2025**, up from €1.6 billion in Q1 – marking the highest quarterly deb volume since Q2 2024, but still far below the record high of €17.2 billion in Q1 2024.
- → **20 debt deals were recorded in Q2**, up from 12 in Q1 and reversing the downward trend of the past four quarters. However, volumes remain modest compared to 2023 levels, underscoring the lingering challenge of debt-financing cleantech projects in the EU.
- → **By comparison**, the much smaller **UK recorded €877 million across 8 deals**, while the **US saw a staggering €16.8 billion across 29 deals** – highlighting the **deeper, more liquid credit markets available to cleantech developers outside the EU.**
- → **While some publicly-backed deals returned this quarter** – including FAIRMAT, Heura Foods, and UP Catalyst with EIB support – private sector appetite remains limited without stronger de-risking instruments and in the context of a fragmented credit market.
- → In contrast, **the US continues to benefit from deeper credit markets**. Even as federal support faces political headwinds, private lenders in the US remain active, including EU-based lenders, such as BBVA and Santander.
- → **Unlocking growth-stage debt at scale remains critical** for Europe's clean industrial ambitions. As cleantech projects mature, the need for bankable business models, blended finance structures, and public guarantees is more pressing than ever.

EU27 Cleantech Debt Investment, 2023 – Q2 2025



Note: Data includes loans, loan guarantees, project finance, and structured debt

BEYOND EQUITY: OTHER FUNDING

Top deals and activities

Batteries and EV Fast-Charging

IONITY	Germany	€600M	Loan
SERI Industrial	Italy	€150M	Loan Garantee
Fastned	Netherland	€35M	Loan

Solar Power

Technique Solaire	France	€302M	Structured debt
greenyellow	Poland	€49M	Loan
Urbanvolt	Ireland	€40M	Loan

Heat Pumps

PAUL	Germany	€120M	Loan

Green Hydrogen

gen-hy	France	€100M	Grant
Lhyfe	France	€53M	Loan

Rail

HELROM Trailer Rail	Germany	€33M	Loan

IONITY

In May, Germany-based Ionity secured €600 million in green loan financing from a consortium of nine commercial banks to expand its high-power EV charging network across Europe. The funding includes €450 million in committed green loan facilities and a €150 million accordion option. Ionity plans to more than double its current 5,000 charging points to 13,000 by 2030 and grow to over 1,300 hubs.

TECHNIQUE SOLAIRE
Produire ensemble une énergie durable

In May, French independent renewable power producer Technique Solaire closed a €302 million debt financing deal. It will bankroll the construction of 240 MWp of solar parks located in France, Spain and the Netherlands. The fresh proceeds will be secured from a senior loan facility extended by French lenders Bpifrance, Credit Agricole group and Societe Generale.

SERI industrial GROUP

In April, Italian producer and recycler of lithium batteries Seri Industrial secured a €150 million financing pool for the expansion of the first Italian Gigafactory producing lithium cells and batteries, with an 8 GWh annual capacity. The participants in the pool financing, assisted by the Archimede guarantee of SACE, are UniCredit, Intesa Sanpaolo, BNL BNP Paribas and CDP.

PAUL

In June, Germany-based PAUL Tech AG secured a €120 million long-term financing facility from MEAG, the asset manager of Munich Re Group. The credit line will support the nationwide rollout of PAUL Net Zero, a heat-as-a-service platform combining AI-driven energy optimisation, heat pumps, and solar technology to deliver CO_2-neutral heating for existing buildings. The financing aims to scale the solution from 2,000 to 20,000 residential units by the end of 2025.

gen-hy

In April, France-based Gen-Hy secured €100 million in grant from the French government, via Bpifrance, to build the country's first factory producing AEM membranes and electrolysers for green hydrogen. Located in the Bourgogne-Franche-Comté region, the facility is part of the EU-backed Hy2Move IPCEI programme and marks a major step in scaling up domestic hydrogen technology.

Lhyfe

In April, France-based Lhyfe secured €53 million in debt financing from top-tier financial institutions to support the construction of four green hydrogen production sites in France and Germany. This first-of-its-kind transaction in Europe marks a major milestone in scaling up Lhyfe's industrial model and accelerating the decarbonisation of mobility and industry.

CHAPTER 03 :
LATEST FROM EU POLICY

CLEAN INDUSTRIAL STATE AID FRAMEWORK

→ On 25 June, the European Commission unveiled the Clean Industrial State Aid Framework (CISAF), a long-awaited step to support EU cleantech manufacturing in the face of rising global competition. The proposal creates opportunities for member states to increase their support to cleantech, while excluding production-based support.

→ CISAF enables Member States to deploy loans and guarantees more easily to cleantech projects, it reflects cleantech investment realities by adjusting flexibility support duration, and it shifts aid limits from the company to project level.

→ Unlike equity, which carries loss risks for taxpayers, production-based support rewards actual performance and gives stronger signals to private capital. Incoming discussions on the EU Budget will be critical to implement output-based aid at the EU level.

STARTUP AND SCALEUP STRATEGY

→ On 28 May, the European Commission unveiled its Startup and Scaleup Strategy. The strategy aims to boost innovative start-ups and scale-ups as key drivers of economic growth. It builds on existing Commission initiatives that already outline concrete measures—ranging from upcoming funding commitments and financial instruments to lead markets, public procurement, private capital mobilisation, and state aid rules.

→ As main takeaways, by Q1 2026, the Commission will propose a 28th regime to streamline cross-border operations for SMEs. The plan focuses on creating a European legal entity and advancing harmonisation in taxation, labour, and social security laws.

→ The European Commission also commits to introduce a Scaleup Europe Fund, that should be privately managed and co-financed to make direct equity investments in strategic sectors such as cleantech.

NEW EIB GUARANTEES

→ On 20 June, the European Investment Bank (EIB) formally approved its new CleantechEU Guarantee Scheme, part of the first wave of announcements under its new TechEU program. This is a tool Cleantech for Europe and its coalition members have championed.

→ When selling innovative clean industrial equipment, cleantech companies are often asked to post bank guarantees—tying up capital that could otherwise go into scaling manufacturing. This new facility offers €250 million worth of counter-guarantees to commercial banks, easing collateral requirements and unlocking working capital.

→ The EIB also launched a €500m PPA Counter-Guarantee Pilot – helping scale-ups and industrial players secure long-term clean electricity, a €1.5bn Grid Manufacturing Guarantee – supporting production scale-up of grid infrastructure across Europe, and a €1.5bn extension to the Wind Manufacturing Guarantee.

MFF AND EUROPEAN COMPETITIVENESS FUND

→ On 16 July, the European Commission proposed a €2 trillion EU budget, targeting 35% for climate and environment. A new European Competitiveness Fund (ECF) is central, with 43% of its €409 billion budget focused on green objectives, boosting industrial innovation and clean transition.

→ The ECF, combined with the €41B Innovation Fund, channels €450B toward scaling cleantech, decarbonisation, and industrial transformation – though the investment gap remains. A single funding architecture supports R&D to deployment, including InvestEU's scale-up tool and production ramp-up for manufacturing like batteries.

→ While the budget reflects the current political constraints, it still falls short of the cleantech investment needs highlighted in the Draghi report. The priority now must be to design public financial instruments that send strong, long-term signals to private investors. Clear demand signals through initiatives like IDAA and NZIA will be essential to enhance project bankability.

IBERIAN BLACKOUT: NOT RENEWABLES' FAULT

→ On 28 April 2025, a massive blackout swept across Spain and Portugal in one of the most significant power system failures in EU history. As headlines rushed to assign blame, many pointed fingers at solar and wind. But the official investigation confirms what experts have long known: this was not a failure of renewables - but of the lack of systemic resilience and inertia.

→ This blackout was a stark reminder that as renewable energy expands, system resilience must keep pace. Spanish and Portuguese governments are now moving to strengthen grid stability. Cleantech for Iberia also released a report urging accelerated grid modernisation, while the European Commission prepares its grids package for later this year. The blackout is not proof of renewable weakness — it is a call to build smarter, stronger grids.

03 IN FOCUS: NEW CLEANTECH FOR EUROPE REPORT OUT! SCALE OR FAIL: A TRADE STRATEGY FOR EUROPE'S CLEAN INDUSTRY

→ In June, Cleantech for Europe released its latest report: "Scale or Fail: A Trade Strategy for Europe's Clean Industry".

→ Over the past decade, **Europe has emerged as a cleantech innovation leader**, developing many of the technologies needed to decarbonise, strengthen supply chain security and resilience, and build industrial leadership.

→ **Yet it now faces a critical scale-up challenge**. Key clean technologies like batteries, electrolysers, and long-duration energy storage are struggling to reach mass production because its innovation system is being undercut by foreign non-market policies and practices.

→ **China's state-driven approach, backed by heavy subsidies and public support, fosters the creation of integrated supply chains and drives overcapacity** which is reshaping global markets and exposing Europe's vulnerabilities.

→ Europe's trade, industrial, and competition toolbox is built around a rules-based global system that has broken down. The tools in the toolbox are often piecemeal, poorly equipped, and postponed, and more importantly, not systematically and coherently connected to each other.

→ Without decisive action, Europe risks missing out on jobs, innovation, and value creation—while becoming increasingly dependent on foreign-made clean technologies. **To stay competitive and secure in this new era of global competition, Europe must move beyond it's singular focus on early-stage innovation leadership—and build the industrial foundations to scale what it invents.**

→ Discover Cleantech for Europe's strategy to restore industrial competitiveness:

- **Acknowledge Reality: Enforce reciprocity and level the playing field.** Adapt trade rules to ensure imported goods meet EU standards and respond to non-market competition.
- **Accelerate Action: Upgrade and accelerate policy tools.** Strengthen and modernise instruments like the Foreign Subsidies Regulation, Foreign Direct Investment screening, and sustainability, resilience, and EU content criteria in public funding and procurement to improve the business case for domestic production, local value added, and technology transfer.
- **Integrate Strategically: Break silos and integrate policy.** Align EU trade, industrial, and competition policies to scale clean technologies and secure value chains.

SUMMER READING (AND LISTENING)

Cleantech for Europe

SUMMER READING

- IEA's World Energy Investment 2025
- OECD's The State of Play of Industrial Subsidies as of 2023
- Institut Montaigne's Cleantech: reducing our strategic dependence on China
- IEA's Global Critical Minerals Outlook 2025
- How Europe's Grid Operators Are Preparing For The Energy Transition – Joint report by Beyond Fossil Fuels, Ember, E3G, and IEEFA

SUMMER LISTENING

- Defence and climate: is a common agenda possible? With Cleantech for Baltics Executive Director Kädi Ristkok – Bruegel Podcast
- No, solar didn't cause Spain's grid collapse – Open Circuit
- Investing in a secure and competitive EU: A Conversation with EIB President Nadia Calviño – The Europe Desk Podcast
- Leaders in Cleantech – Podcast Episode with Danijel Višević, Founding Partner, World Fund
- How energy will shape the future of AI (and vice versa) – Everything Energy, by the International Energy Agency
- The KKR Energy formula – Redefining Energy, Podcast episode with Emmanuel Lagarrigue, Partner and co-head of Global Climate at KKR