Baltic Cleantech Insights 2024

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Executive summary

"In 2024, the Baltics continue to confirm their spot as a global leading cleantech region," says Kädi Ristkok, Executive Director of Cleantech for Baltics. With an increasing public and political focus on security and economic competitiveness, clean technologies are taking an increasingly central position as per their contributions to energy security, strategic autonomy, resilience and industrial competitiveness. In Estonia, the sector continued its steady upward trajectory, marked by more later-stage deals and strong public support for early-stage ventures, setting the stage for greater export activity and dual-use applications in 2025.

Across the region, cleantech momentum was driven by ambitious national strategies and expanding public-private support. "In 2024, Lithuania's cleantech ecosystem reached new milestones—from transformative green infrastructure investments to bold policy shifts and innovative funding programs," noted Laima Balčiūnė, Director for Lithuania. In Latvia, progress continued through increased climate targets and early-stage support. As Imants Martinsons, Director for Latvia, observed: "Despite structural challenges such as limited piloting infrastructure and access to scale-up capital, the Baltics are increasingly positioning themselves as a dynamic and agile testbed for cleantech solutions in Europe and beyond." Together, the three countries are proving that compact, innovation-driven ecosystems can shape Europe's green future.

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Baltic trends

Change in discourse – competitiveness and resilience

Due to the slowdown in economic growth in Europe and the ongoing war in Ukraine, doing "just cleantech" is no longer the goal. Thus, cleantech is going through a process of change where competitiveness and resilience are becoming the new key priorities for managing the next qualitative development level of the sector.

Focus on the energy sector

The energy sector has been a key focus in the Baltics for years, and the desynchronisation from the BRELL grid has reinforced its strategic relevance. This momentum continues, now backed by more systematic national support aimed at accelerating innovation and ensuring long-term energy independence.

The ecosystem support continues to be strong

The public support from different ecosystems and support organisations has grown significantly over the years. The Baltic states with the support from EU (e.g., RRF and JTF in critical implementation phase) are more than ever supporting clean technologies and the transition to a cleaner economy.

We are entering a stage where larger cleantech scale-ups are reshaping the landscape, driving up total investment volumes despite a lower number of deals. The emergence of these high-value growth funding rounds signals a maturing ecosystem, where fewer but more substantial investments are beginning to dominate the statistics.

Changes in the investment flows

Another record-breaking year for the sector

€639M OF CAPITAL WAS ALLOCATED TO BALTIC CLEANTECH COMPANIES IN 2024

- Large-scale funding rounds are driving overall investment growth, with later-stage deals becoming more dominant, while seed-stage activity remains steady.
- A notable highlight of the year is Lithuania's Vinted, with a round of €340M (secondary share sale) in the final quarter of 2024.
- Estonia leads Europe in per capita cleantech investment, once again surpassing the US.



INVESTMENTS IN THE BALTIC CLEANTECH SECTOR, 2017-23 (M ${f \in}$)

Investment trends in the Baltics (1)

Investments in sub-sectors

While the Resources & Environment sub-sector leads due to a concentration of growth-stage deals, Energy & Mobility has shown consistent stability over the years across both early- and growth-stage investments in the Baltics.

Investments vs deal count by quarter

Quarterly data from 2024 shows a sharp rise in capital deployed in Q4, marking it as the most active period in terms of investment volume. However, this was accompanied by a steep decline in deal count, indicating a consolidation trend: fewer deals, but larger in size.



2024 investments in cleantech sub-sectors (including Growth capital)

Cleantech investments and deal count in 2024 by quarter



Investment trends in the Baltics (2) With total annual investments of €639M across 31 deals, the average deal size in 2024 was approximately €20.6M.



Estonia

With 19 deals, Estonia saw a slight decline compared to last year, though the sector remains stable. The average deal size rose to €14.3M, with Energy & Power once again accounting for the most deals.

Latvia

Latvia saw 8 deals in 2024, with an average deal size of €1.68M-reflecting a strong focus on early-stage activity. All investments were concentrated in the Transportation & Logistics sector.

Lithuania

With 4 deals in 2024, down from 9 last year, Lithuania saw activity split between early and growth stages. Most deals were in Resources & Environment, continuing a volatile investment trend.

Baltics in the EU context and global trends



Baltics break away: maintaining cleantech growth amid EU slight slowdown

In 2024, cleantech investment in the Baltics surged to a five-year high of \in 620 million – more than double the total in 2022. Although the number of deals declined slightly from 45 to 31 year-over-year, this reflects a strategic shift toward scale-ups and commercialisation. In contrast, EU-wide cleantech venture capital investment dropped by 24%, falling from \in 11.6 billion in 2023 to \in 8.8 billion in 2024, according to Cleantech for Europe. Deal activity also declined, with the number of transactions decreasing from 721 to 665.

Despite these headwinds, the EU's share of global cleantech venture capital remained relatively stable at 22%, down only slightly from 23% in 2023. However, this modest share stands in stark contrast to the United States' growing dominance, where investment rose in relative terms and global share increased from 32% to 42%. China, by contrast, experienced a sharp contraction. This global rebalancing highlights the urgent need to strengthen Europe's cleantech capital markets and industrial strategy. With rising geopolitical uncertainty, including the potential impact of a new U.S. administration and escalating trade tensions, Europe must accelerate efforts to build resilient domestic markets and reinforce its global competitiveness.



Cleantech for Baltics year-in-review

2024 marked a year of growth and strategic positioning for Cleantech for Baltics (CfB), as momentum continued to build across the region's cleantech landscape. CfB strengthened its presence in both EU and Baltic policy arenas, expanded coalition engagement, and played a pivotal role in advancing cross-border collaboration.

A major milestone came ahead of the June 2024 European Parliament elections, when CfB launched the Cleantech for Baltics Manifesto – a bold call to action outlining key priorities to scale up financing, shape enabling policies, and drive demand for clean technologies. To build momentum, CfB hosted roundtable discussions with MEP candidates in Latvia and Lithuania, resulting in broad political support and a strong, cross-Baltic endorsement of the manifesto.

On the institutional front, CfB welcomed the establishment of the Estonian Cleantech Association on 7 May, marking the evolution of Cleantech Estonia (2015–2024) into a formal business association representing national cleantech interests.

The coalition expanded in 2024, welcoming new members including Skeleton Technologies and Beamline Accelerator from Estonia; Naco Technologies from Latvia; and Open Circle Capital and Solitek from Lithuania. Over the course of the year, CfB hosted four coalition meetings in Tallinn, Riga, and Vilnius, focusing on key sectoral priorities - from growth financing and permitting challenges to cleantech's role in defense and the advancement of regional energy cooperation. These convenings helped shape CfB's advocacy strategy and strengthened alignment across the Baltic cleantech ecosystem.

EU level policy

2024 marked a turning point for EU cleantech policy, setting the stage for a more ambitious and coordinated industrial strategy. Central to this shift is the forthcoming **Clean Industrial Deal** (CID) – a flagship initiative announced by the new European Commission, which took office in December. The CID is expected to define the EU's cleantech agenda for the next decade, with a focus on industrial decarbonisation, scaling up clean manufacturing, and enhancing economic competitiveness. Against a backdrop of intensifying global pressures, including Donald Trump's return to the U.S. presidency and escalating geopolitical tensions, the CID seeks to solidify Europe's leadership in clean technologies and reduce strategic dependence on external supply chains.

Adopted in June, the Net-Zero Industry Act (NZIA) set a target for the EU to domestically produce at least 40% of its strategic net-zero technologies by 2030. The legislation introduces accelerated permitting processes, one-stop shops, and streamlined regulations for key sectors such as solar, wind, batteries, and carbon capture.

The European Hydrogen Bank awarded €720 million in its first auction and launched a second round worth €1.2 billion, introducing limits on non-European electrolyser components to strengthen local value chains. Under the Innovation Fund, two major calls launched in December – €2.4 billion for net-zero technologies and €1 billion for EV battery production – introduced new criteria focused on resilience and supply chain security.

The Critical Raw Materials Act, adopted by Council in March, aims to enhance supply security for essential inputs by promoting diversification, domestic sourcing, and strategic partnerships.

Main national climate policy priorities and local strengths 2024

ESTONIA

- Climate Resilient draft • The Economy Act, represents a pivotal step in aligning Estonia's economic development with its climate goals. underlining Estonia's Further ambition, consultations progressed on the updated National Energy and Climate Plan and the Energy **Management Development Plan** 2035, which propose phasing out oil shale electricity by 2035 and tripling renewable capacity.
- Additionally, the newly introduced Waste Reform aims to improve recycling rates and resource efficiency through unified national sorting standards.

LATVIA

- In 2024, Latvia submitted its final updated National Energy and Climate Plan, setting ambitious goals for 2030, including 100% renewable electricity for domestic use and at least 80% in final consumption. The plan emphasizes boosting renewable energy, energy efficiency, and emissions reduction.
- Additionally, a draft Transport Energy Law was approved, requiring fuel suppliers to cut the emissions intensity of their fuel mix by 16% by 2030—marking a key step toward decarbonising the transport sector.

LITHUANIA

- In 2024, Lithuania advanced its green transition with major policy updates. The revised Energy Independence Strategy targets full decarbonisation by 2050, backed by the updated NECAP, which commits to 100% renewable electricity by 2030 and over €31 billion in green investments.
- The new Hydrogen Guidelines position Lithuania as a future regional hub, while excise tax reforms aim to boost biogas adoption. Renewable generation surged—up 70% year-on-year supported by significant grid expansion.

Baltic public funding measures focused on green and just transition

ESTONIA

In 2024, the SmartCap Green Fund remained Estonia's primary public financing tool for cleantech. Backed by the EU Recovery and Resilience Facility (RRF), the €100M fund continues direct investments while expanding through two new VC funds-2C Ventures and SFV-each launched with €20M to support clean technology startups. In parallel, the **Environmental Investment** Centre (KIK) introduced five new RRFbacked green accelerators in sectors energy, mobility, construction, like materials, and biodiversity, guiding startups from idea to investment readiness.

In 2024, Latvia expanded its public support for cleantech – one of the most substantial was the launch of **new** competence centres, which received a total of €112 million, with €40 million specifically allocated for the development of green technologies. ALTUM, Latvia's state-owned development institution, finance concluded tenders for private equity fund managers, committing €37.2 million to support early and growthstage cleantech ventures. This will further strenghthen and lead to more investment activity in 2025.

SEE ALL SUPPORT MEASURES FOR CLEANTECHS!

The government's Climate Change Programme (funded by ETS emission auction revenues) and EU instruments under the Green Deal (including the Recovery and Resilience Facility and Cohesion Policy funds) channelled substantial resources into green projects. Over one-third of RRF and **Cohesion funds supported climate** action. Key programs included €71M for solar, €180M for energy storage, €54.9M for industrial efficiency, and a green hydrogen project. €122M Transport decarbonisation advanced with a €100M EIB loan and upcoming biogas tax exemptions.

Export and growth trends & challenges

Findings from the 2024 Baltic Cleantech Survey reveal key trends shaping the region's scale-up landscape, market focus, and internationalisation efforts.

- Given the limited size of domestic markets, export remains the primary growth pathway for Baltic cleantech companies. In 2024, top export destinations were concentrated in three key markets, where companies focused on market analysis, establishing local networks, piloting solutions, and adapting technologies to local conditions. While a smaller subset advanced to contracting distributors and generating initial sales, most companies remain in the earlier phases of market entry.
- Looking ahead to 2025, the United States, the Nordics, and Western Europe are emerging as the most strategic target 个 markets. These regions offer strong innovation readiness, alignment with climate policy goals, and promising opportunities for piloting and scaling cleantech solutions.
- Despite growing momentum, several key barriers continue to hinder the growth of the Baltic cleantech ecosystem: ^
 - Limited access to capital, especially for growth-stage ventures and project-based financing.
 - Difficulties in engaging corporations and the public sector as development partners or first customers.
 - Regulatory complexity, including challenges in securing patents, certifications, and navigating uncertainty particularly in emerging cleantech domains.
 - Barriers to piloting at scale, driven by both financial and logistical constraints.
 - High pressure to deliver early revenue and traction, especially in capital-intensive environments.
 - Internal capacity gaps, notably in team building and international sales capabilities.

Innovation, testing and piloting

According to the 2024 Baltic Cleantech Survey, most Baltic cleantech companies largely see themselves as strategic, structured innovators, yet their innovation budgets remain modest. Most invest between €50,000 and €200,000 annually in research, development, and innovation (RD&I), with only a few scaling their investments to €1–2 million. This trend reflects both the early-stage maturity of many startups and the limited availability of growth-oriented innovation funding.

One of the most pressing barriers to scaling innovation in the Baltic cleantech sector is the lack of adequate testing and piloting infrastructure. Companies frequently report challenges in:

- Accessing or scaling up to industrial-grade testing environments
- Finding suitable equipment or industrial partners
- Financing the construction of pilot production facilities
- Navigating a shortage of piloting and experimentation resources, including time, capital, and public funding
- Convincing potential partners to engage in early-stage piloting collaborations

At the same time, permitting processes remain a major bottleneck for deployment. Common issues include: • Unclear or overly complex regulatory frameworks, especially for novel or cross-sector technologies

- Bureaucratic delays when engaging with state-owned entities
- Limited internal resources to manage lengthy and costly approval procedures
- Additional post-permit testing requirements that delay go-to-market timelines

These challenges highlight the urgent need for better-aligned support systems-particularly in piloting infrastructure, regulatory clarity, and early deployment frameworks—to unlock the full innovation potential of Baltic cleantech companies.

Cleantech for Baltics Main Priorities for 2025

Unlocking Growth Financing for Baltic Cleantech Scaleups

The Baltic cleantech sector is maturing, but access to growth-stage funding remains limited. With few local growth funds, startups often depend on external investors, risking talent and innovation outflow. Enhancing financing availability is essential to scale local solutions, attract EU and global capital, and strengthen the region's role in Europe's clean industrial transition.

Strengthening Cleantech's Role in Baltic Resilience and Defense

Energy and resource resilience are now key to national security in the Baltics. Cleantech solutions—such as local energy systems, storage, and efficiency technologies—can directly support defense capabilities. Yet, their potential remains underutilized.

Elevating cleantech in defense discourse will help align security, climate, and innovation goals.

Positioning the Baltics as Europe's Leading Cleantech Testbed

With agile markets, digital leadership, and supportive regulation, the Baltics are well placed to lead in cleantech testing and early deployment. Fast-tracking innovation through streamlined permitting and real-world piloting can give Europe a competitive edge— and the Baltics a distinct strategic role in shaping EU cleantech leadership.

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Cleantech for Baltics

The objective of Cleantech for Baltics is to establish a coalition as a strong community of start-ups, scale-ups and investors across the Baltic states that can act as the unified voice of the cleantech sector, inform and engage with policymakers and raise the profile of the topic in the regional public debate. The coalition will also promote regional collaboration and raise the profile of Baltic cleantech at the EU level. It is an initiative by Estonian Cleantech Association, Greentech Cluster Latvia and Sunrise Valley Science and Tech Park.

Research and writing of this publication were conducted by Cleantech for Baltics to provide up-to-date data on the developments of the Baltic cleantech sector and to share information on open support measures and policies with the ultimate goal of attracting and increasing investments in cleantech – from boosting early-stage innovation to accelerating scaleup and deployment for the transition to net zero.

The analysis is based on desk research, analysis of databases of companies' investment information and public support measures (including public websites), email correspondence and interviews conducted from November 2024 to January 2025.

We are grateful to the startup founders who shared their company metrics and the representatives of ministries and government agencies who supported the study with policy insights and expert knowledge.

