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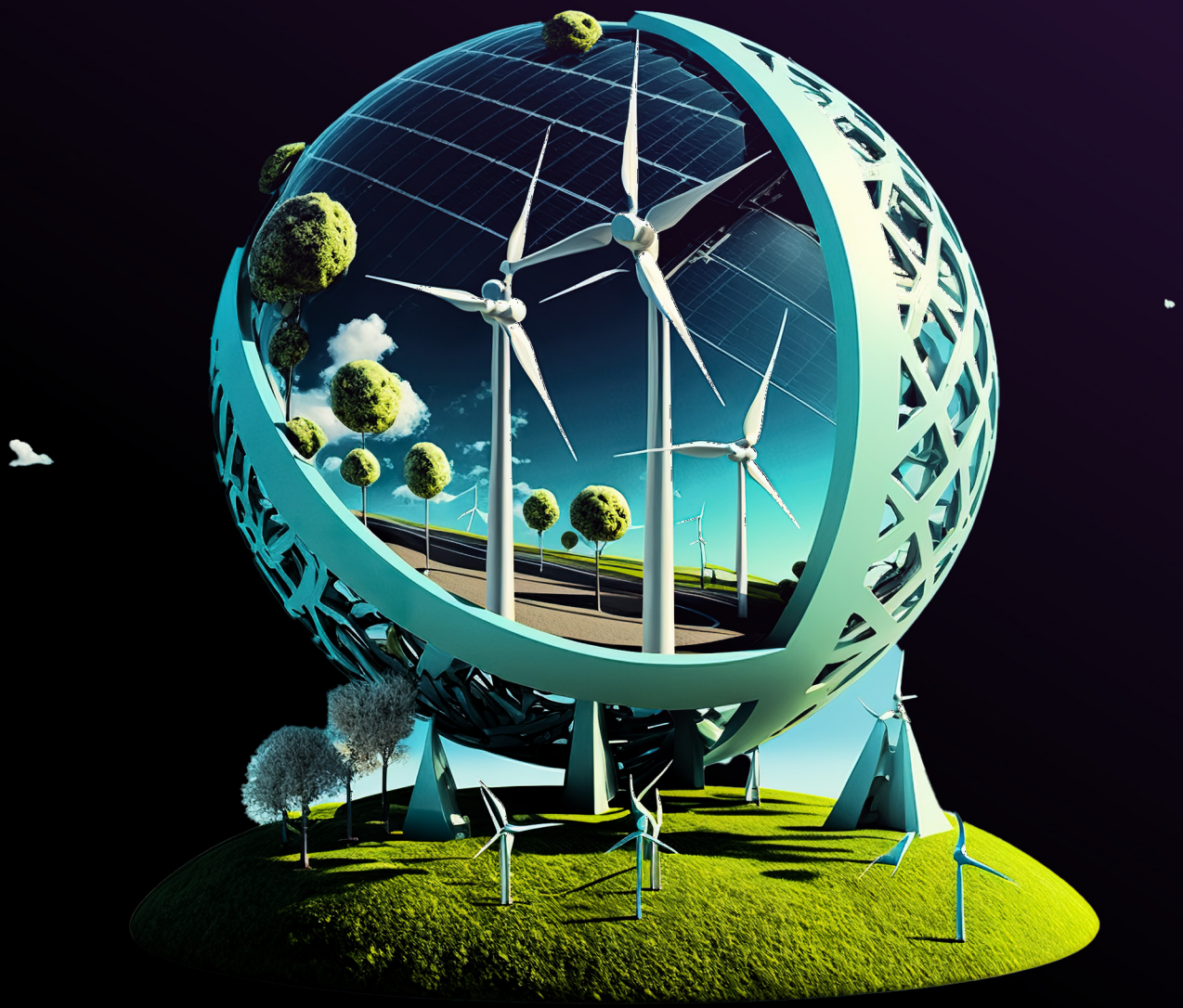

Driving Climate Tech Growth: A Startup's Handbook for Non-Dilutive Funding

March 2025

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Introduction

Europe is at a pivotal moment in the transition to a sustainable future. With increasing regulatory momentum, heightened awareness of the climate crisis and new innovative technologies, climate tech companies are uniquely positioned to lead this transformation. However, the challenge of commercialisation, compounded by capital constraints, continues to be a major hurdle.

Non-dilutive funding - grants, subsidies and government loans - have become well-positioned as a key financial strategy to address this gap, allowing companies to retain control while accelerating their growth from lab to industry.

We are excited to present this report, the result of the joint work of Climate First and Deloitte Catalyst. This report reflects the shared commitment to driving innovation in climate technologies by exploring funding mechanisms that allow companies to scale without sacrificing equity-a critical lever for both early-stage and established ventures.

Through this report, we aim to shed light on the landscape of non-dilutive funding in Europe, offering insights into its scope, trends and opportunities. You will find Deloitte's overview of funding sources available, enriched by case studies from Climate First's companies and roadshow programme, Net Zero Insights database and other industry leaders.

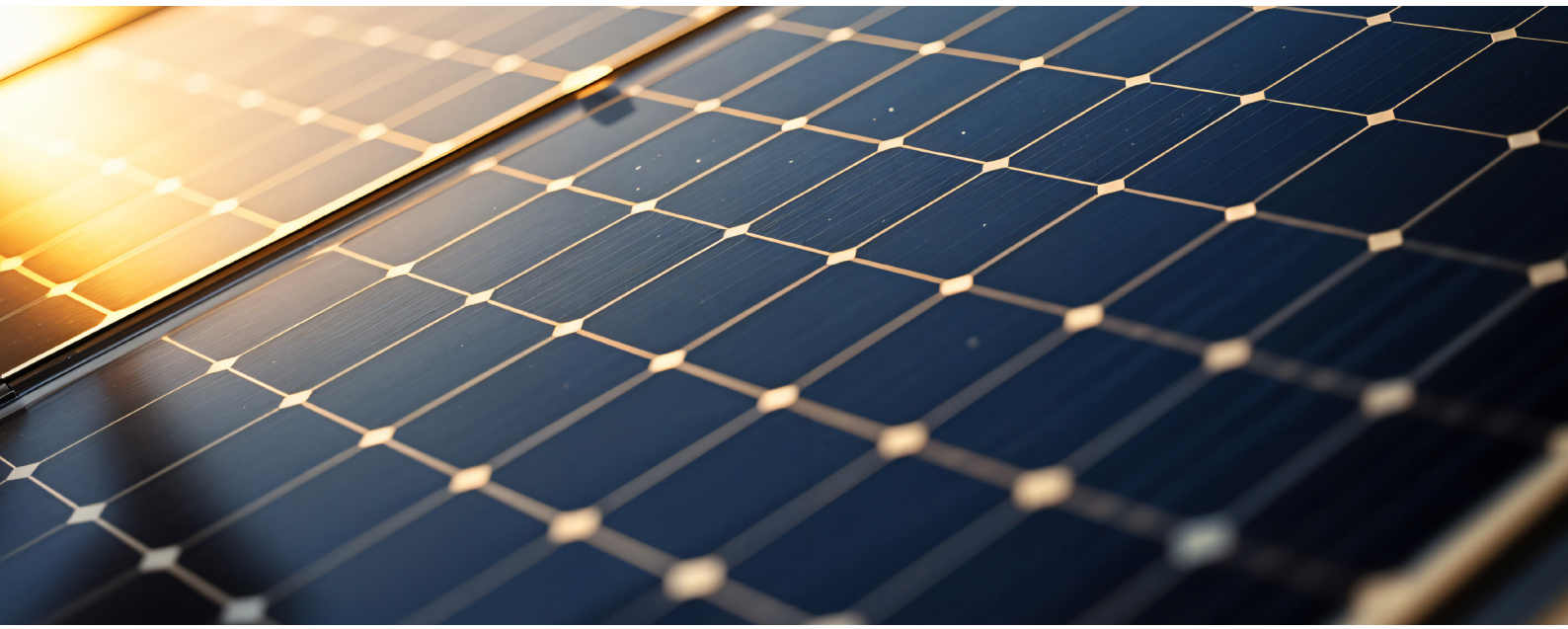


Table of Contents

Executive Summary
Driving Climate Tech Growth: A Startup's Handbook for Non-Dilutive Funding

Climate Tech: A Growing Industry

The climate tech sector is rapidly expanding, driven by the urgent need to address the global climate crisis. Governments and corporations worldwide are prioritising decarbonization, making climate tech innovations essential for achieving goals set by global agreements, like the Paris Accord and COP commitments[2].

Spanning massive industries such as energy, manufacturing, transportation and agriculture - climate tech plays a critical role in the transition to a low-carbon economy.

This growth is driven by Net Zero targets[3], government incentives, consumer demand for sustainable products and the need for secure supply chains amid de-globalization.

The numbers clearly demonstrate this spike, with venture capital investments in climate tech having surged from $4B in 2013 to $50B in 2023, with European investment surpassing the U.S. surpassing the U.S. for the first time at $21B in 2023.

Non-Dilutive Funding: A Key Financial Strategy

Non-dilutive funding (NDF) provides startups and entrepreneurs with capital without requiring equity or ownership dilution, making it a vital financial strategy particularly in sectors like climate tech.

Common forms of NDF include government grants to assist R&D projects, governmental contracts to support more advanced companies providing services or prototypes, R&D tax credits that help offset innovation costs, as well as favourable loans with low interest rates and flexible repayment terms for scaling operations.

Globally, non-dilutive funding for climate tech has become a significant financial instrument, with government grants climbing from $840M in 2021 to $4B in 2023, accounting for 33% of global climate tech funding in the latter.

This funding is crucial for early-stage companies facing high R&D costs, with pre-seed and seed-stage startups being the primary recipients. The availability of this capital offers founders an opportunity to grow faster, make bold investments and bring breakthrough technologies to market, while maintaining independence.

Non-Dilutive Funding in Europe: A Supportive Ecosystem

Europe has positioned itself as a leader in the volume of non-dilutive funding for climate tech, with government spending more than doubling from €1B in 2022 to €2.4B in 2023. Through policy initiatives such as the €1 trillion European Green Deal[4], the £90 billion UK Green Investment Plan and various national-level programmes, the region has fostered an environment where non-dilutive funding is readily available for innovative startups.

These frameworks provide critical funding to support research, development and commercialisation of sustainable technologies. This funding also addresses key areas such as reducing emissions; advancing renewable energy innovations; improving smart grids and energy storage; and driving economic growth through job creation.

The majority of these grants focus on small businesses, typically with fewer than 50 employees. This creates a fertile ground for climate tech startups to access resources that can accelerate their path to commercialisation. In this report, we highlight the opportunities that non-dilutive funding presents for early-stage companies, using examples from Climate First's companies (over 93% of Climate First's companies have successfully raised non dilutive funding). For startups that align their business models with global sustainability goals, non-dilutive funding can unlock significant potential and strengthen their ability to scale their solutions across Europe and beyond.

The Growth of the Climate Tech Industry

The Global Climate Tech Sector

Climate tech encompasses a range of technologies aimed at combating climate change by reducing Greenhouse gases (GHGs) emissions or adapting to environmental shifts. These solutions often include deep-tech, which utilises hardware, software, IoT and biotech. Climate tech solutions are applied across various industries, primarily targeting the top five GHG-emitting sectors: Energy & Electricity (27%), Manufacturing & Industry (31%), Transportation (16%), Agriculture (19%) and the Built Environment (7%)[5].

This Industry is Growing Due to Several Main Factors

There are several decarbonization drivers behind the growth of the Climate Tech industry, including Net Zero goals pushing for GHG reductions, government policies offering incentives (e.g., grants, credits, loans and taxes) and rising market demand from consumers and corporations for eco-friendly products aligned with ESG standards.

These drivers are fuelling the development of technologies that either mitigate emissions (mitigation solutions) or help adapt to current environmental conditions (adaptation solutions). As a result, there's been a surge in companies developing solutions for these increasing trends and a significant increase in funding for climate tech innovations[6].

"In addition to decarbonization, another key driver of climate tech is the de-globalization process," adds Guy Cherni, Co-Founder and Managing Partner at Climate First. "De-globalization is pushing governments and corporations to develop alternative supply chains and production facilities to ensure security in energy, food, water and manufacturing. The solutions to these challenges lie in the same technologies driving climate tech."

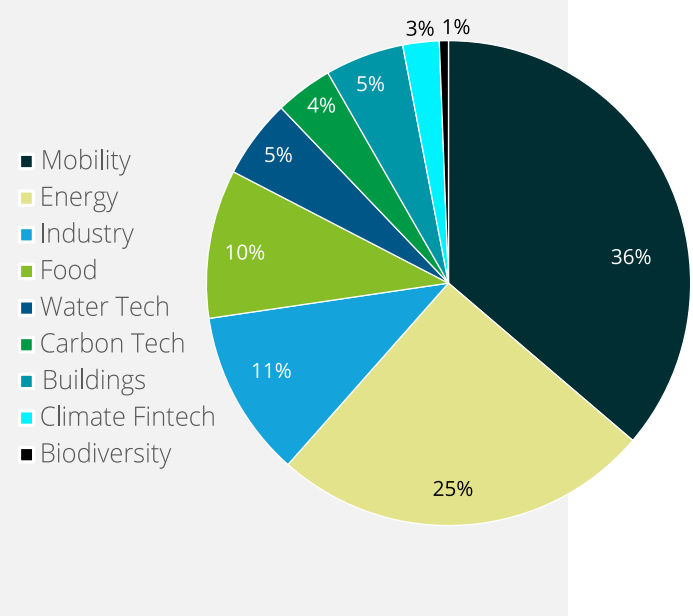
The Climate Tech Industry is Growing - Globally

Investments in climate tech are rapidly growing, with global climate tech VC investments soaring 12x in a decade-from $4B in 2013 to $50B in 2023[7]. The share of climate tech investment as a percentage of overall VC funding has tripled, rising from 5% to 16% in the same decade.

This funding surge allows climate tech startups more flexibility, reflected in larger seed rounds (climate tech startup average Seed funding has grown to $1.7M in 2023 from $1.1M in 2013[8]) with steady year-over-year growth.

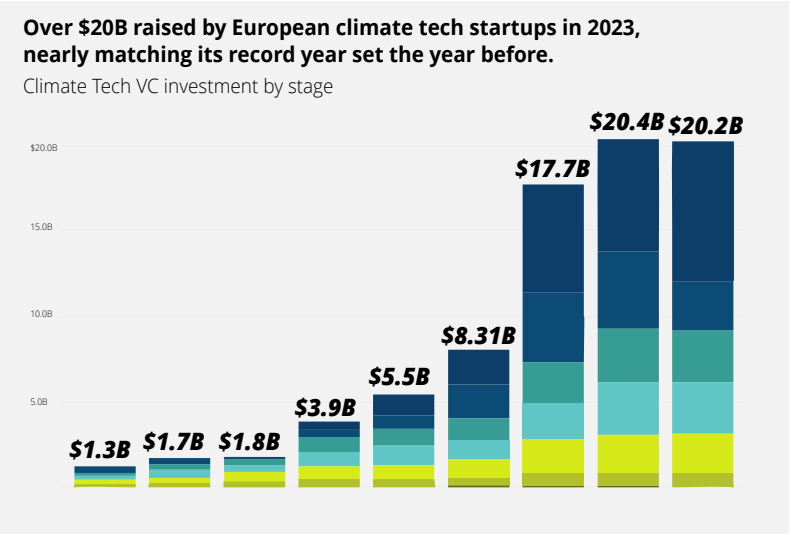
Key sub-sectors in 2023 included Solar; Smart Grids; Electric Vehicles (EVs) and charging solutions; Green Steel; and Carbon Capture, Utilisation and Storage (CCUS).

Global Climate Tech VC funding by segments



Climate Tech in Europe

The European Climate Tech industry (including the UK, Switzerland and Israel) is experiencing rapid growth, driven by a robust pan-European entrepreneurial ecosystem, top-tier academic institutions fostering technological innovation, strategic corporations offering support and testing grounds, grounds, as well as increasingly favourable policies. From 2017 to 2023, total climate tech funding grew 11-fold to $20.2B. Notably, in 2023, Europe outpaced the U.S. in climate tech VC funding for the first time, with $21B compared to $14B[9].



https://dealroom.co/guides/climate-tech#:~:text=Zooming%20out%2C%20climate%20tech%20funding,decade%20(2023%20vs%202013)

Non Dilutive Funding (NDF) Opportunities

Definition

Non-dilutive funding is the provision of capital to companies or entrepreneurs without requiring them to forego equity or ownership. It's a strategic tool used by governments to ***promote innovation and R&D*** by de-risking investments, ***fostering economic growth and competitiveness*** by supporting new technologies and businesses, and ***advancing public and social goods*** through targeted funding for these areas[10].

Types of NDF: Grants, Contracts, Loans and Credits – Understanding the Differences

There are four main financial instruments which deliver non-dilutive capital that may be beneficial for startups:
Grants are commonly used to support research and development (R&D), most of which are allocated by governments (although some can be provided by foundations and other non-profit organisations).
They are often awarded for specific projects, and based on the nature of the awarding agency - may or may not need to be repaid from royalties.

In contrast, ***Government Contracts*** outline the supply of specific R&D services, prototypes, or deployment of products or services. Usually, contracts are awarded to companies that are at more advanced stages of development, compared to lower Technology Readiness Levels (TRLs) which are typical to companies in R&D stages.

An additional source of funding is ***R&D Credits.*** R&D Credits are a type of tax credit that can be claimed by businesses that invest in R&D activities. These credits reduce the businesses' tax liability, effectively providing a financial incentive for R&D investments. R&D Credits can be a valuable tool for businesses of all sizes, as they can help to offset the costs of R&D and encourage innovation.

Moreover, climate tech startups may also be eligible for ***Favourable Government Loans***, enabling them to scale their operations and further expand their product development. These government loans typically offer lower interest rates compared to traditional business loans, extended repayment periods, possible grace periods and flexible collateral requirements.

Global NDF for Climate Tech in Numbers

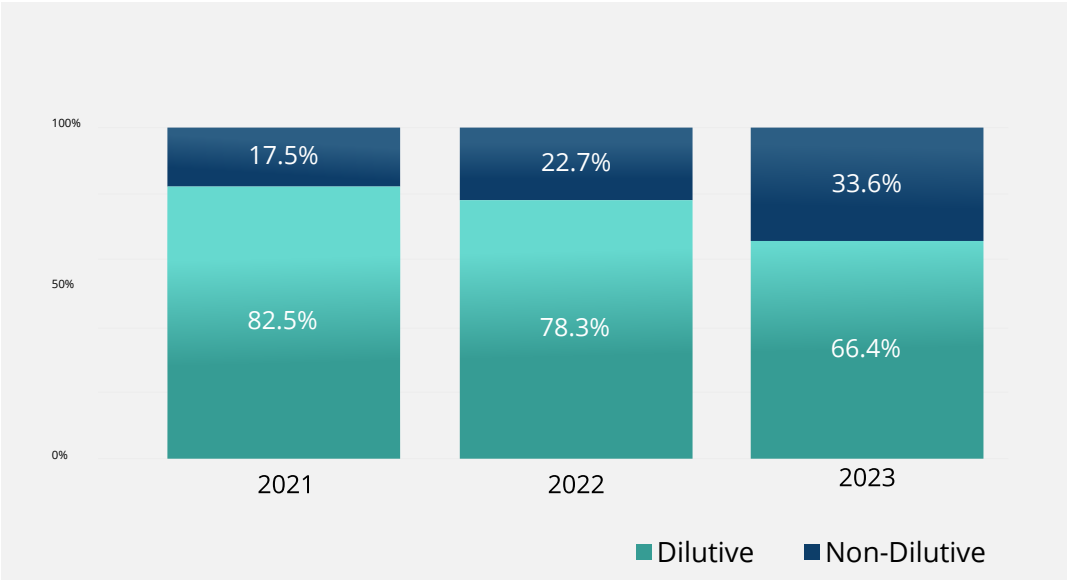
In the Climate Tech industry, non-dilutive funding, particularly government grants, are a key financial resource for startups. Globally, climate tech companies raised $840 million in grants in 2021, which increased sevenfold to $4 billion by 2023.

Since many of these companies focus on deep-tech development, these grants provide crucial support during the early stages, when R&D costs are high and cash flow is limited.

Non-dilutive funding plays a vital role in supplying capital without requiring founders to give up equity. In 2023, non-dilutive funding accounted for 33% of global climate tech funding - twice the share from two years prior.

Most grants go to pre-seed, seed and early-stage companies, while later-stage recipients make up only about 13% by deal count.

Share of global funding



Policy as Opportunity in Europe

Recent developments in the pan-European policy landscape led to the creation of multiple regulatory frameworks that are poised to drive meaningful progress in meeting climate targets set by European countries. These frameworks, by the provision of tax incentives, public-private partnerships and avenues to secure NDF, present significant opportunities for startup companies and represent a strong European effort to foster innovation and investment in sustainable technologies.

To try and achieve a better sense of how policy drives development and adoption of climate change prevention solutions, it is worth highlighting the following frameworks:

EU Green Deal[11]: Provides €1 trillion in funding for climate tech solutions, to achieve climate neutrality by 2050. It initiates over 175 directives and regulations aimed at advancing clean energy investment, driving climate tech innovation, enhancing supply chain requirements, mandating sustainability reporting and launching other transformative programmes.

UK Green Investment Plan[12]: Provides £90 billion in investments and 440,000 green jobs by 2030. The programme supports businesses and consumers in moving to clean power, with the goal of advancing the UK's transition to net zero by 2050.

EIF Climate Funds[13]: "As an Implementing Partner for the EU under InvestEU, the EIF is deploying €11 billion into funds, with a strong emphasis on climate technologies. The EIF will provide equity investments to high priority thematic strategies including a primary focus on climate action and environmental sustainability.

Renewable Energy Directive (RED)[14]: Provides multi-billion Euros in funding to increase EU energy consumption from renewable energy sources, to at least 40% of total energy consumption by 2030. The RED establishes common rules and targets for development of renewable energy across all sectors.

Carbon Border Adjustment Mechanism (CBAM)[15]: Sets a carbon tax on the carbon emitted during the production of carbon intensive goods entering the EU, thereby ensuring the carbon price of imports is equivalent to the carbon price of domestic production.

Sustainable Finance Disclosure Regulation (SFDR)[16]: Requires transparency in financial institutions' sustainability efforts. The SFDR aims to enhance transparency regarding sustainability risks and the consideration of adverse sustainability impacts in investment processes, for financial market participants and financial advisers.

EU Taxonomy for Sustainable Activities[17]: Provides a common definition of environmentally sustainable economic activities, aiding the EU in scaling up sustainable investment, preventing greenwashing and reducing market fragmentation.

Circular Economy Action Plan[18]: Sets measures to reduce waste, promote recycling and encourage use of sustainable materials, focusing on the sectors that use most resources and with high potential for circularity, such as: electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients.

Methane Emissions Regulation (EU 2024/1787)[19]: Sets strict controls on methane emissions from fossil fuel operations and imports, with a goal of halting the preventable release of methane into the atmosphere from produced and consumed energy.

European Climate Law[20]: Sets binding targets for achieving a 55% reduction in emissions by 2030 and full climate neutrality by 2050. The law aims to ensure that all EU policies contribute to this goal and that all sectors of the economy and society play their part.

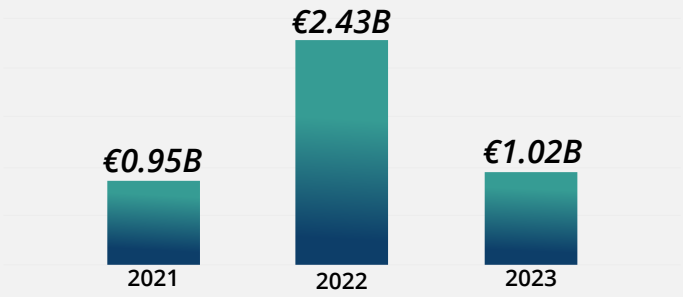
EU HQ-based NDF for Climate Tech in Numbers

In recent years, government spending on European climate tech companies has surged, rising from approximately €1B in 2022 to €2.4B in 2023[21]. This increase is driven by growing demand to address several key issues: Reducing GHG emissions; fostering technological innovations in renewable energy, smart grids and energy storage for improved efficiency; promoting economic growth through job creation and investment; and ensuring regulatory compliance.

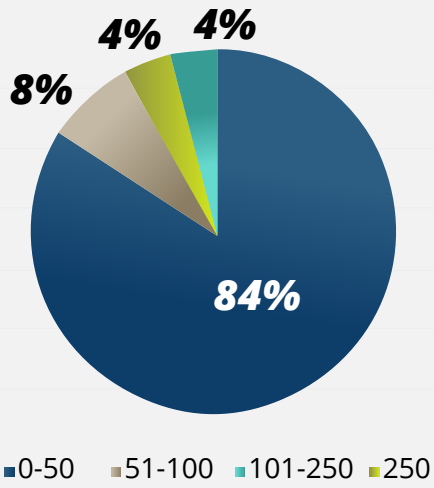
Additionally, climate tech's role in enhancing the resilience of communities and infrastructure against adverse climate impacts, creates an impetus for additional investments.

Most grants, contracts, loans and credits are awarded to small businesses, which are crucial to European innovation and growth[22]. These companies typically have fewer than 50 employees and annual revenue or balance sheets under €10M. Notably, 86% of these companies are relatively young, under 10 years old.

EU-based climate tech company funding



Climate tech companies awarded grants based on employee count



"Non-dilutive funding in Europe's Climate Tech sector is steadily growing, offering exciting opportunities, though there's still great potential to enhance its scale and cohesion to fully support the level of innovation needed", says Nadav Steinmetz, Co-Founder and Managing Partner at Climate First. "To accelerate breakthrough climate solutions, we need to build a new playbook-one that combines public and private capital, fosters collaboration across sectors, and strategically invests in scaling companies that have the potential to become global market leaders in driving decarbonization."

Benefits of Non-Dilutive Funding

When evaluating the advantages of non-dilutive grants for climate tech startups, several elements may be beneficial for the company, particularly for R&D-intensive companies:

Preserving equity
Non-dilutive grants allow founders to retain control over their business, as no equity is given up. This is crucial for long-term planning and growth, as future investors can be brought on board without significantly diluting existing shareholders.

Supporting cash flow
Grants provide essential capital for operational needs, such as payroll, equipment purchases and other expenses, ensuring the company can maintain smooth operations and focus on growth.

Leveraging R&D investments with a seal of excellence
Grants help startups advance their R&D while extending their runway, complementing existing venture capital funding. A government grant often serves as a strong endorsement, signalling the startup's scientific and commercial potential. This can increase private investor confidence and attract further investments, increasing the overall capital available to the company.

De-risking novel ideas
Climate tech startups often focus on cutting-edge research with long development cycles. Non-dilutive grants de-risk these projects by providing financial support without requiring immediate returns, allowing startups to innovate freely without compromising their financial stability.

Ongoing government support
Startups often receive multiple grants over time, forming long-term relationships with government agencies. This ongoing support (contrast to a singular grant awarded to the company) may include additional funding, access to contracts and networking opportunities, fostering sustained growth.

Global reach
Many government grants facilitate international collaboration and exposure, enabling startups to access new markets, partnerships and customers, which can help expand their operations beyond their home country.

In summary, non-dilutive grants represent a meaningful opportunity for climate tech startups, offering financial support without relinquishing equity.
They extend a startup's runway, ease cash flow constraints and provide a mark of credibility, which can attract investors, further government backing and global collaboration opportunities.

Challenges in Non-Dilutive Funding and Mitigation Strategies

Although highly beneficial, grants are challenging. Awareness of these potential challenges can assist applicants in planning and managing grants, thereby increasing their chances of success. Here are key points to consider:

Varying success rates

Winning an R&D grant can have a positive impact on a startup. However, grants are competitive - some more than others, and there is no guarantee for winning. An effective solution to mitigate this, can be for example – submitting applications to different funding mechanisms, across multiple geographies. Due to the nature of these competitive applications, aligning the objectives and scope of said grant(s) with the startup's development and goals is also important (refer to the matrix on pg. 16 for additional points to consider).

Adherence to the initial application

Usually, grants are approved based on significant detailing of work programmes or in-depth description of the proposed work. In practice, several months and even years may pass from the initiation of the work plan to its execution. The company might realise that things look different on the ground and differ from the initial scope, and modifications need to be made. In practice, most grant mechanisms allow certain flexibility from the original plan but companies are urged to plan well in advance, based on all the relevant information at hand and their expertise.

Compliance and reporting

Actively managing grants can take its toll on the company. Depending on the size, scope and complexity of the grant, this may require significant time dedicated for ensuring that the company meets the grant's terms and for reporting. A proven method to mitigate this is consulting with a reputable consulting firm that is well-versed in reporting and project management.

Intellectual property and confidentiality concerns

Some grants may have clauses that affect the ownership of intellectual property developed during the project, especially when development is carried out by multiple partners. This can impact the company's ability to commercialise the technology. These issues should be addressed during the application process and throughout its implementation as well.

European Non-Dilutive Funding: Innovation Landscape and Funding Mechanisms in Leading Countries

NDF opportunities vary from one geography to another, with each country establishing its own particular variety of programmes, rules and guidelines. Some geographies may be more favourable to startups than others. The non-exhaustive list below details some of the more favourable European geographies.

One of the largest government R&D grantors in Switzerland is the ***Swiss National Science Foundation***[23] (SNSF). The SNSF supports research projects across disciplines with a variety of instruments, including basic research individual grants, project grants and national research programmes. Switzerland's programme covers a spectrum of research, starting from basic to applied research across all scientific disciplines. ***Innosuisse***[24] (the Swiss Innovation Agency), focuses on national and international innovation projects between universities and implementation partners such as SMEs. In 2023, Innosuisse's funding doubled YoY to $578 million, reaching an all-time high. One notable new initiative is the Swiss Accelerator Network that provides direct financial support to innovative Swiss companies.

Germany offers an expansive system of R&D grants, primarily aimed at fostering innovation within companies, with a particular focus on SMEs and startups. The ***Federal Ministry of Education and Research*** is one of the largest funding agencies for R&D in Germany. It focuses on topics that are relevant to society and the economy and supports research in areas such as Health, Energy, Climate Change and Digitalization, offering a variety of funding programmes including research grants, research programmes and technology transfer programmes. Germany's ***Federal Ministry for Economic Affairs and Climate Action*** is funding the ***ZIM programme*** (Central Innovation Programme for SMEs) that launches several thousand new projects every year[25] that promotes cross-border innovation through feasibility studies, cooperation projects and innovation networks, supported by bilateral agreements with multiple countries.

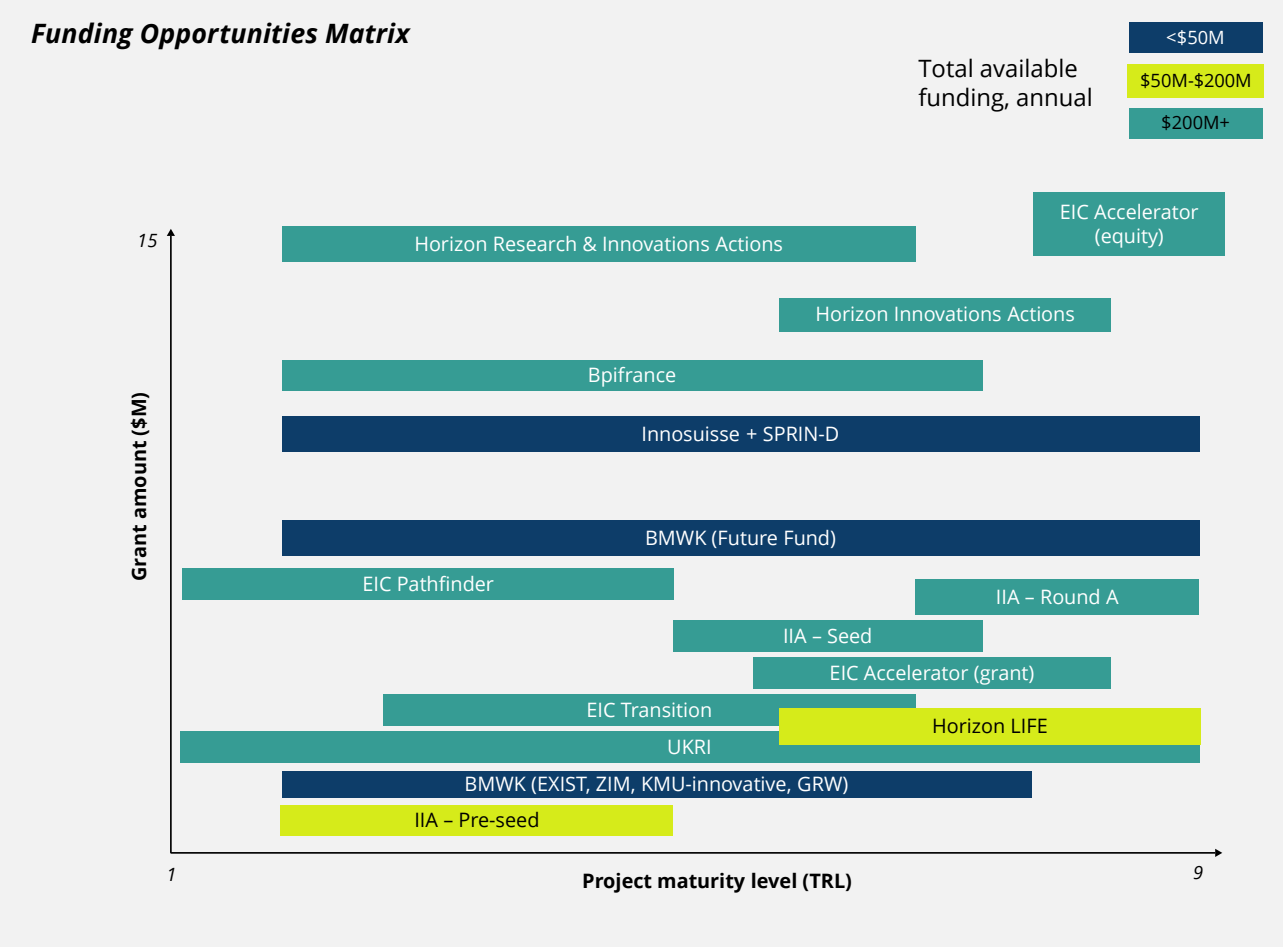
The ***UK***, through various agencies and initiatives, aims to foster technological advancements, improve competitiveness and promote research-led innovation across multiple fields. The UK's innovation ecosystem is heavily funded by ***UK Research and Innovation*** (UKRI), one of the primary funding bodies investing in R&D in the UK.
With an annual budget reaching approximately $9 billion, UKRI is responsible for promoting innovation across various sectors, with its research and innovation grants awarded through its seven councils, Innovative UK and Research England.

France's main mechanisms are led by its prominent research institutions such as ***CNRS*** (French National Centre for Scientific Research) and ***INRAE*** (Research for Agriculture, Food and Environment), as well as ***ANR*** (the National research agency that funds and promotes scientific research projects across various disciplines) and ***Bpifrance***[26] (a public investment bank that supports business growth through financial products like loans, guarantees and equity investments, with a strong focus on innovation).

Israel's innovation landscape is unique, boasting over 7,000 startups as of 2024, making it a world-leader in number of startups per capita[27] and a global leader in R&D investment as percent of its GDP according to the OECD's recent measurements[28].
As of March 2023, 516 Israeli tech companies were active in climate tech in a diverse range of fields - from energy (24%), agritech, (10%), to food-tech (16%) and water (11%)[29]. Recently Israel's Ministry of Energy published a call[30] for public comment on an outline designed to bring greenhouse gas emissions from the energy sector to zero by 2050. The most significant government organisation that supports R&D is the ***Israel Innovation Authority (IIA).***
The IIA's R&D Fund, the main instrument for assisting startups, is being gradually phased out, replaced by the Startup Fund (Track no. 7), which is designed for ongoing investment in Pre-seed, Seed and Round A companies. Innovation Authority funding can reach up to 60% of the entire financing round (depending on the maturity of the company; later stages receive smaller support) and up to ~$5.5M per company in total.

Funding Opportunities Matrix

When evaluating grants for research and development, entrepreneurs are advised to consider three main issues, depicted in the matrix below. ***Firstly*** - the TRL (Technology Readiness Level): Different grant mechanisms are aimed at different TRLs; ***Secondly***, the grant amount; ***Thirdly***, the total available funder-per-mechanism is crucial: The absolute number of awardees impacts the success rate. The matrix below visually details the main funds available; note that not all programmes may be relevant to all companies, and they may have different terms, target different audiences and some may overlap in terms of TRLs.



Case Studies of Non-Dilutive Funding - Climate First Companies

Climate First is a European investment firm headquartered in London. It backs teams driving decarbonisation on a global scale and powering the next industrial transformation. Climate First has invested in over 50 companies and supports them through its roadshow platform, connecting them with global partners in energy, manufacturing, advanced materials and other key industries.

A common thread of Climate First's portfolio is the substantial non-dilutive funding these portfolio companies have secured. Grants are an integral part of their strategic funding plans, with 93% of Climate First companies having raised non-dilutive funding.

Collectively, they have secured over €100 million in grants. The sizes and purposes of these grants vary, ranging from small R&D grants in the hundreds of thousands of Euros to nearly €20 million for pilot, demonstration and production facilities. Many companies have effectively integrated grant funding as a core growth strategy, starting with small grants and progressing to larger, more advanced grants as they scale. As demonstrated in the examples below, NDF opportunities hold much potential to support entrepreneurs in their growth efforts by securing additional funding for critical resources while not foregoing control over their companies.

Case Studies of Non-Dilutive Funding; Climate First Companies

In this section, we share insights from case studies of Climate First's companies. Through interviews with their founders, we explored how these companies secured NDF and strategically leveraged it for growth. The selected companies represent diverse countries, successful NDF outcomes and different experiences. Each utilized the funding differently to support their growth-ranging from financing early operations and de-risking technology, to funding initial pilots, plants and manufacturing facilities.

Metafuels Secures Swiss Energy Grant for Breakthrough e-SAF Technology, Leading Aviation's Carbon-Reduction Revolution

Metafuels is a Zurich based aviation tech startup, focused on the development and deployment of proprietary sustainable fuel technologies, with an initial focus on synthetic sustainable aviation fuel (e-SAF). The company's "Aerobrew" technology produces e-SAF from renewable methanol through an efficient, selective and scalable process, aimed at decreasing the cost of production while simultaneously delivering up to 90% reduction in life cycle assessment (LCA) CO_2 emissions.

COMPANY DESCRIPTION

Transforming green methanol into sustainable aviation fuel (SAF), enabling low-carbon air travel and sustainable cargo transport.

2021
Year founded

13
# of Employees

€20.7M
Total amount of funding

INDUSTRY
Aviation, SAF (Sustainable Aviation Fuel)

LOCATION
Switzerland

€4.7M
Total amount of funding obtained through grants

GRANTS RECEIVED

€4.7M - Swiss Government's Federal Office of Energy, Pilot and Demonstration Program[31]

Metafuels secures 4.7M CHF grant

In July 2024 Metafuels secured funding from the Swiss Federal Office of Energy's Pilot and Demonstration Program, which supports technologies at Technology Readiness Level (TRL) 4 or higher. The program is designed to fund innovative solutions that align with Switzerland's net-zero goals. The grant provides 50% coverage of the total costs for designing, building and operating a demonstration facility, with funding totalling 4.7 million CHF through 2026.

The project is being led by Metafuels, in collaboration with the Paul Scherrer Institute (PSI), its technology development partner[32].

The demonstration plant will be located on PSI's campus, utilising its infrastructure, utilities and development resources - to support the project's success.

Strategic approach to grant applications

Metafuels followed a structured strategy for applying for grants, tailored to their specific funding needs and timelines. The process starts with an assessment of the funding landscape based on when the funds will be required. For instance, the planned start date for building their demonstration plant was evaluated in order to determine the funding needed and to assess the timing and suitability of available funding instruments. Preparation began early, with initial meetings held with the relevant ministry about a year before the application submission. The team ultimately submitted their application 6–7 months in advance.

The team also evaluated their internal expertise, identifying knowledge gaps and assigning roles between the team members for the application process. That included, inter alia, assigning a team member to lead the financial aspects, and another to focus on the technical components, thus optimizing the process and making it efficient and more professional. While Metafuels handled the Swiss grant application independently, they noted that they would likely use consultancy services for more complex applications, such as those for EU grants.

Golden Tip from Saurabh Kapoor, Co-Founder and CEO, Metafuels

- *"Screen Properly: Ensure that the grant programme you're considering is the right fit for your project. Check success rates and see which companies have won similar grants before. For example, if only 50 out of 3,000 companies are selected, it may not be worth the time investment".*
- *"Start Early: Begin preparations well in advance. Talk to others who have been through the process to gain insights from their experiences".*
- *"Manage Expectations: Stay level-headed and don't be discouraged if your application isn't successful. It's all part of the journey".*

Securing Grants to Scale Innovation: Traceless' Journey in the Circular Economy

Traceless is a circular bioeconomy start-up based in Hamburg, Germany. Based on plant leftovers of the agricultural industry, the company produces natural biomaterials that are plastic-free, resource efficient and naturally regenerative. The company aims to replace single-use plastics in large volumes and is currently working on implementing its technology at scale.

COMPANY DESCRIPTION

Circular bioeconomy startup, offering a biomaterial solution to tackle plastic pollution.

2020
Year founded

63
# of Employees

INDUSTRY
Circular Economy, Advanced Materials, Plastic

LOCATION
Germany

GRANTS RECEIVED

€2.42 million from the European Innovation Council
€5.1 million from the Federal Ministry of Environmental Protection of Germany
A few small R&D grants (undisclosed)

Grants received by Traceless

Traceless has secured over €7.5 million in grant funding to date, beginning with smaller awards that helped cover initial salaries and supported early research and development efforts. On a larger scale, the company received €2.42 million from the European Innovation Council (EIC) and €5.1 million in national funding from Germany's Federal Ministry of Environmental Protection, allocated for the construction of their production site.

Use of external assistance for grant application

For the EIC grant, Traceless used a consultancy service, which from the company's perspective, was essential to the process. Despite this external support, the application process still required approximately six weeks of full-time commitment from both founders.
However, the effort paid off, with the grant more than doubling Traceless' seed investment.

Golden Tip from Anne Lamp, Co-Founder and CEO, Traceless

"It's worth applying for grants, but make sure to talk to consultancy services and programme officers beforehand, to fully understand what's expected and what to avoid. Every company needs to assess what serves them best. In our case, it was better to focus on the larger grants and apply for smaller grants only when it made sense".

Grants as Catalysts: How C1 Drives Chemical Innovation

C1 develops new, climate-friendly chemical production processes by rethinking chemical reactions from the atomic level all the way up to the production scale. The chemical processes are designed with the help of quantum chemical simulations and implemented in proprietary production technologies. In doing so, the Berlin-based company develops and scales on the basis of renewable raw materials and energy. From the first steps in the development of a production process, all processes are designed to enable a closed carbon cycle.

COMPANY DESCRIPTION

Developing new chemical production processes to produce green methanol.

2022
Year founded

30
# of Employees

€25.7M
Total amount of funding

INDUSTRY
Chemicals, Methanol

LOCATION
Germany

€12M

Total amount of funding obtained through grants

GRANTS RECEIVED

€10.4M - Leuna 100 Project Grant[33] in 2023
€600,000 - GRW Grant[34] by German Federal Ministry for Economic Affairs in 2022
€250,000 - SPRIND[35] validation grant - German Federal Agency for Disruptive Innovation) in 2022

Grants received by C1

C1 has secured three Germany-specific grants:

• Leuna 100 Project Grant (€10.4M): This research grant, funded by the Federal Ministry of Transport, was obtained as part of a consortium, which is a requirement for this type of grant. The consortium consists of four research partners, with C1 being the only for-profit company involved. While the total grant is €10.4M, C1 will directly receive €4M. The company is required to cover 25% of the project costs.

• GRW Grant (East Germany-Specific): This grant supports new business activities, with a focus on job creation or equipment. C1 opted for equipment subsidised at 60%. The total grant is capped at €1M, providing approximately €600,000 over three years.

• SPRIND Grant (Federal Disruptive Innovation): This €250,000 grant was received through a validation contract. It funded the planning and project management for the Leuna 100 pilot plant, including project scope agreements and mid-project updates. Importantly, the intellectual property (IP) remains with C1.

Experience with an unsuccessful grant submission

C1 applied for the EIC Accelerator Grant but was not selected. Out of 1,100 applicants, 300 made it to Brussels, and only 45 were awarded the grant. Christian Vollman, CEO of C1, viewed the process to be bureaucratic and time-consuming and may involve high expenses, and there is no guarantee of success. That led C1 to carefully consider any future grants for their First-Of-A-Kind (FOAK) project and to plan thoroughly before seeking funding.

C1's approach to using grant consultancy services

When in-house expertise is lacking, a consultancy service can be invaluable. The C1 team includes a member who previously worked in a government agency distributing green hydrogen grants and now manages their applications. Without this expertise, they would likely have engaged a Consultancy. This team member dedicates about a third of his time to grant-related tasks, including searching for opportunities, submitting applications, as well as overseeing reporting and project management, once the grant is secured.

Golden Tip from Christian Vollman, Co-Founder and CEO, C1

"Don't build your company around chasing grants. Some founders believe in raising as much as possible through grants, but the process is slow, and grants are project-specific. This can lead to companies managing multiple projects just to secure funding and as a result, lose focus. Instead, focus on planning projects first, then look for grants that fit your strategy".

De-risking Innovation: How GR3N Leveraged Grant-Funding at Every Stage

GR3N developed a process which provides an economically viable approach to the recycling of PET packaging and polyester textile, allowing for its industrial implementation. The process is sustainable and industrially viable as it breaks down any type of PET and polyester into its two core components, which can then be re-assembled to obtain virgin-like plastics allowing endless recycling loops. The company is part of PETCORE Europe; Chemical Recycling Europe; and Accelerating Circularity.

COMPANY DESCRIPTION

Turning plastic waste PET into 100% virgin material

2013
Year founded

17
# of Employees

€15.5M
Total amount of funding

INDUSTRY
Textile ,PET, Recycling

LOCATION
Switzerland and Italy

€3.65M
Total amount of funding obtained through grants

GRANTS RECEIVED

€450,000 - Synbioptima[36], EU Commission (2015 - 2019)
€700,000 - DEMETO[37], EU Commission (2017-2021)
€2.5M - cPET, (2022 - 2024)

GR3N has secured several grants at various stages of its technology development process, each enabling a significant progress:

• Synbioptima: This grant enabled GR3N to progress from TRL 4 to TRL 5 by funding the development of its first industrial reactor, capable of processing 10-20kg per hour, and a pilot purification line. The funding was secured by integrating industrial symbiosis, where waste is transformed into valuable materials using GR3N's depolymerization technology. Collaboration with other groups, who provided the necessary polymers, played a key role in securing the grant. The grants allow for full funding of EU projects, that can be time-consuming, allowing companies to advance their technology without depleting internal resources.

• DEMETO: A collaborative EU project with over 10 partners, focused on PET depolymerization, where GR3N served as the project coordinator. The €700,000 grant was crucial for designing and building the reactor with an external partner, helping to validate the depolymerization process up to TRL 7. Having well-known partners like H&M added substantial credibility and support.

• cPET: GR3N received €2.5 million for the cPet project, initially from the EU and later funded by the Swiss government. The full amount of the grant was allocated directly to GR3N. It funded the construction of GR3N's reactor, allowing them to control their timeline and reach TRL 8. However, in addition to the reactor, they required funding for the purification process, which was secured through a convertible note.

Limitations of Grant-Based Funding

One downside to fundraising through grants is the need for thorough advance planning, which can make the process feel rigid. Funding bodies closely monitor how the money is used, tying the project to the original plan. For example, in the third project, where the reactor was built, it was easier because the company was the sole beneficiary. However, in collaborative projects, the process becomes more complex due to the need to coordinate with multiple partners.

Golden Tip from Maurizio Crippa, Co-Founder and CEO, GR3N

"It is important to professionally design the structure of the fees paid to grant consultancies to also include a success-based amount, to ensure accountability and better outcomes. In some cases, consultancies can even be rewarded further by becoming a partner in the EU project they help write, such as taking on the role of dissemination partner".

"The right balance and fee structure may be different in different cases, and I've even seen colleagues who achieved better results by avoiding upfront fees and choosing performance-based agreements only. This approach ensures your investment is protected and leads to higher-quality applications".

How Fairbrics Drove a Consortium to Successfully Secure a €17M Grant

Fairbrics is enabling the textile and packaging industries to achieve their net-zero goals by upcycling Co_2. Fairbrics has developed a carbon negative fibre material using CO_2, water and water and electricity - to replace fossil resources and avoid Co_2 emissions. The company's first product is a CO_2-based polyester for the textile and packaging industry, with a 70% lower carbon footprint compared to the high-performance materials, without diminishing quality.

COMPANY DESCRIPTION

Using CO_2 waste to manufacture virgin synthetic fabrics instead of using fossil resources.

2019
Year founded

27
# of Employees

€26M
Total amount of funding

INDUSTRY
#Textile #Packaging

LOCATION
France

€20M
Total amount of funding obtained through grants

GRANTS RECEIVED

€100,000 - France BFTE[38]
€750,000- BPI[39] (half was grant, half was zero interest loan)
€500,000 - ADME[40]
€17M - Horizon Europe[41]

Impact of the €17M Horizon Europe grant on Fairbrics and key factors in securing it

The €17M Horizon Europe grant was a significant milestone for Fairbrics. Shared among a consortium of 12 companies, Fairbrics directly received half of the funding, which was instrumental in constructing their demonstration plant and advancing the technology, helping them reach Technology Readiness Level (TRL) 8. It also enabled the company to expand the team and capabilities.

Several factors were critical in securing the grant. Strong market traction, backing from H&M as an investor and robust IP portfolio were key. They also presented Letters of Intent (LOIs) from major companies, which demonstrated strong industry interest. Additionally, the diversity of the consortium - comprising both academic institutions and corporate partners and the project's alignment with the EU's goal of reindustrializing Europe, were crucial in winning the grant.

Assembling a consortium, key benefits and challenges

Assembling a consortium was a process that involved significant effort and external support. Fairbrics engaged a consultancy service to help form the consortium, which took nearly three months. The final consortium consisted of 12 companies, with Fairbrics as the coordinator of the application. This collaboration provided Fairbrics access to expertise in areas where Fairbrics lacked in-house knowledge, as well as the opportunity to partner with large corporations. The partnership helped Fairbrics to reduce development costs and also to enhance the project's credibility.

However, such processes can be challenging, as they may require complex collaborative agreements and a demanding, time-consuming application process that required meticulous planning.

Securing intellectual property (IP) rights was another challenge, particularly with academic partners. In Fairbrics case, these rights were essential for its long-term technology licensing strategy, thus introducing challenges in the process. An additional issue that may create challenges is varying levels of commitment from partners, when partners may hold different views on the importance of the project to their own success.

Structure and disbursement of grant financing throughout the project

The grant funding was structured in tranches. Fairbrics received 50% of the funding at the start of the project, with the remaining amount disbursed upon reaching specific milestones. These milestones included technical achievements, such as developing the pilot line and operating the demo plant continuously for three months. To date, the pre-financing and first tranche have been received.

Golden Tip from Benoit Illy, Co-Founder and CEO, Fairbrics

"Identify the right partners well before you apply for grants and build those relationships well in advance of the deadline. Additionally, securing a reliable consultancy service can greatly enhance your chances of success".

Conclusion and Take-Away Pointers for Entrepreneurs

The climate tech sector is experiencing rapid growth, fueled by global decarbonization efforts and urgent environmental challenges. Non-dilutive funding plays a pivotal role in helping climate tech startups scale without giving up ownership, making it a key financial tool for founders. As outlined in this report, Europe is at the forefront of providing policy support and capital to drive innovation in this area. **For those who understand how to navigate and access these funding opportunities, the potential for impact and growth is immense.**

Some take-away pointers relating to Non-Dilutive Funding for entrepreneurs to consider and assess:

Match the grant with the company
Assessing if the grant that is being applied for aligns with the company's mission, goals and stage of development. It is important to tailor the grant application to fit the business model and company focus, to increase the likelihood of success.

Read the fine print
Carefully review all terms and conditions associated with the grant. Understanding the obligations, restrictions and reporting requirements is crucial to ensure compliance and avoid any potential issues that could jeopardise the funding or create legal complications.

Take the required time
It is important to thoroughly understand the grant requirements and prepare a comprehensive application. Not investing the required time to assess and analyse the grant and terms, can lead to mistakes, incomplete information and a weaker proposal - all of which can reduce the chances of receiving the grant.

Engage with consortiums early on
If the grant involves collaboration with other organisations or companies, it is important to start building relationships with them, or form consortiums in ample time to allow the successful creation of the consortium and increase the probability of securing the grant. Early engagement usually enables better coordination, stronger partnership and a compelling joint application.

Diversify risks
Grants are competitive; diversifying funding sources by applying for multiple grants in different geographies may help maximising chances of success. Additionally, it is important to explore supplementing financing options such as venture capital, angel investors and loans - to enhance the company's funding and not to rely solely on grants.

Consult a professional
Identifying, composing and submitting grant applications can be a lengthy and complex process with many pitfalls and hidden nuances. Engaging experts who specialise in grant writing and funding strategies, may: provide valuable insights; streamline the application processes; allow existing staff to dedicate their time and experience to their forte; improve the process and the quality of the submission.

Grants can be highly beneficial for startups, in particular during their early stages, when investment in technological development is required, often - while still working to establish a product-market fit. Closely evaluating these grants before applying and constructing a long-term grant submission strategy, while balancing the pros and cons for their company, may be beneficial and valuable to founders and entrepreneurs. The report shares insights taken from the experience of others, which can be summarized in the Persian Proverb: "Thinking well is wise; planning well - wiser; doing well - wisest and best of all".

Endnotes

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31. Details and information regarding the project and grant were provided by the company directly.
32. PSI is a research institute for natural sciences and engineering in Switzerland conducting research in the fields of future technologies, energy and climate, health innovation and the fundamentals of nature.
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About Climate First:

Climate First is a European investment firm dedicated to addressing the climate crisis, by backing startups with the potential for both significant returns and substantial decarbonization. The firm's partners consist of fund managers, venture investors and scientists - with experience in driving investment in climate tech. Climate First's portfolio spans across Europe, including the UK and Israel, with companies operating in different sectors such as Renewable Energy; Energy Storage; Carbon Capture and Sequestration; Mobility and Transportation; Built Environment; Sustainable Agriculture; Advanced Materials; Climate Data and Analytics and more. Through its roadshow programme, Climate First has supported over 40 climate tech founders by connecting them with key corporate partners, institutional investors and financial institutions within its global network.
Climate First companies operate across diverse sectors but share key similarities: They are all committed to decarbonizing key industries, have raised millions of Euros from climate tech investors and global corporations, and demonstrate strong customer traction—some generating millions in revenue or securing billion-Euro offtake agreements. These companies are at various stages of development, from building their first demonstration plants to preparing for first-of-a-kind commercial projects.

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CLIMATE FIRST

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