

# Unlocking sustainability



Biogenic CO<sub>2</sub> credits for long-term carbon removal.



Our climate is under increasing pressure, requiring companies to reduce their footprint and offset hard-to-abate emissions.

## Our climate is under increasing pressure

Global temperatures are rising, and the window to limit warming to 1.5 °C or 2 °C is closing fast.

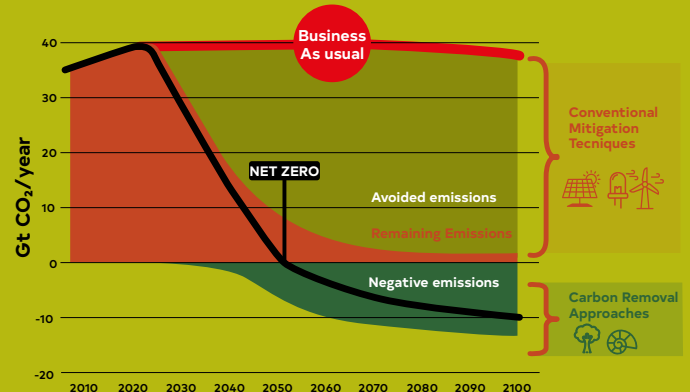
## Urgent need for corporate emission reduction

Companies play a crucial role in addressing the climate crisis by reducing greenhouse gas (GHG) emissions through energy efficiency, renewable energy, and cleaner technologies.

## Offsetting hard-to-abate emissions

Even with substantial reduction efforts, many industries will still have residual, hard-to-abate emissions. Offsetting solutions, such as Carbon Dioxide Removal (CDR), are essential to neutralise these emissions and achieve net-zero.

## Staying below 1.5 degrees of global warming



Source: Net zero by reversed mining, Perpetual Next position paper

# The Voluntary Carbon Market (VCM) enables corporates to offset residual emissions towards their sustainability targets.

## Carbon markets

- There are two main carbon markets: the mandatory market, driven by regulations, and the voluntary market, where companies voluntarily offset emissions. This document focuses on the Voluntary Carbon Market (VCM), enabling companies to meet sustainability goals by purchasing carbon credits.

## Key factors influencing VCM growth and pricing

- Best practice changes: new guidelines on communication claims, quality initiatives to raise standards, and Science Based Targets initiatives (SBTi) encouraging companies to invest in decarbonisation efforts beyond their own value chain.
- Macroeconomic conditions: economic trends impacting investments.
- National climate policies: shifts in policy affecting carbon market dynamics.

## Market outlook

- The VCM is expected to grow 3–7 times by 2030, generating 0.1–1.4 GtCO<sub>2</sub> of reductions annually\*

\* Trove Research (November 2022).  
The projected supply-demand gap to 2050 in the voluntary carbon market.



# The innovative carbon removal through biogenic credits solution helps companies achieve net-zero goals with confidence.

## Introduction to Attero

Attero processes waste into new raw materials and green energy and is at the forefront of waste management with the mission: 'maximum recovery of renewable resources and energy from waste.' The latest innovation project is capturing and permanently storing CO<sub>2</sub> as a supplier of the joint venture Aramis project.

## What are biogenic credits?

Biogenic credits are generated by capturing and storing CO<sub>2</sub> from biogenic waste, ensuring traceable and certified permanent carbon removal.

## What sets us apart?

Our biogenic credits offer a certified, permanent solution (1.000+ year) to offset hard-to-abate emissions, helping companies meet net-zero goals.

## Attero captures CO<sub>2</sub> emissions from waste incineration with BECCS technology, ensuring permanent storage and transparency.

### How credits are generated

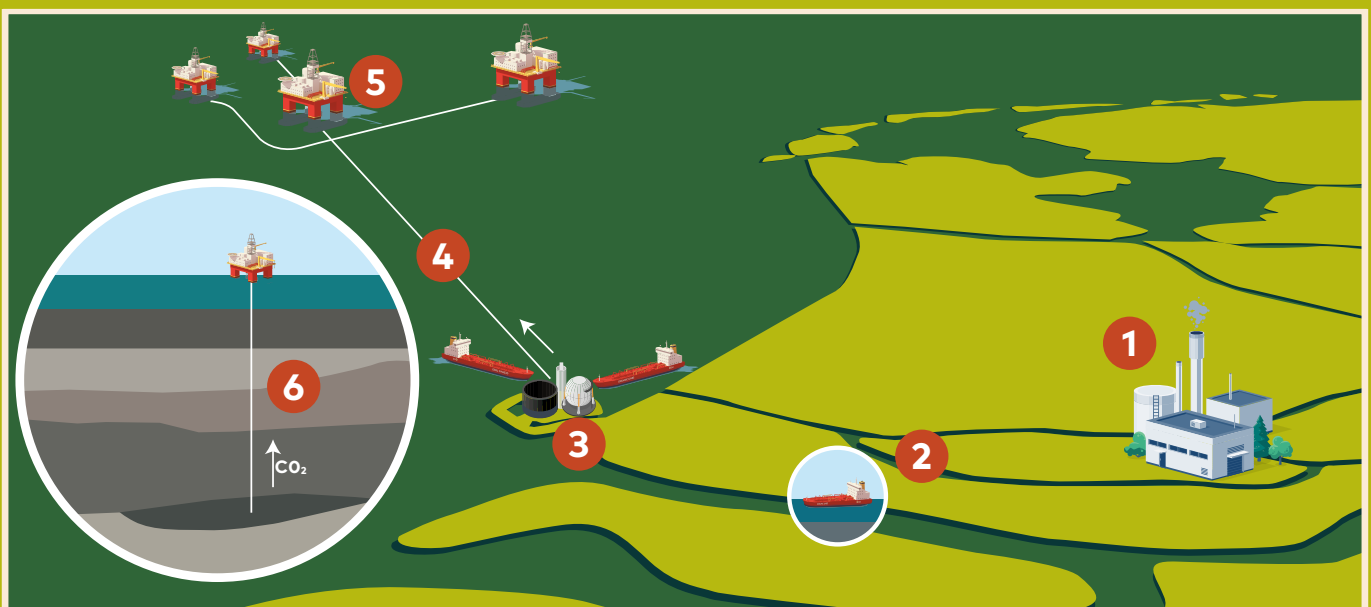
- Attero captures CO<sub>2</sub> emissions from waste-to-energy processes, and ships the liquified CO<sub>2</sub> to a terminal at the Maasvlakte where it is injected in a trunkline system and securely stored in depleted gasfields under the North Sea.
- This technology is known as BECCS, Bio-Energy with Carbon Capture and Storage, with sustainable biomass sourcing from our Waste-to-Energy activities.

### Transparency and tracking

- Every credit is traceable from capture to storage, providing full transparency to corporate buyers and meeting reporting requirements.

### Planning

- Anticipated go-live in 2029.



**1 CO<sub>2</sub> capture:** CO<sub>2</sub> is captured by industry and made suitable for transport.

**2 CO<sub>2</sub> transport:** industry transports CO<sub>2</sub> from the capture facilities to the collection hub on the Maasvlakte by ship.

**3 CO<sub>2</sub> collection hub:** the captured CO<sub>2</sub> is delivered to a central collection point at the Maasvlakte, consisting of the CO<sub>2</sub>next terminal and a compressor station. The CO<sub>2</sub>next terminal will receive, store, and pressurize liquid CO<sub>2</sub> from vessels before sea pipeline transport. The compressor station pressurises CO<sub>2</sub> delivered by land pipeline for sea pipeline transport.

**4 CO<sub>2</sub> offshore pipeline:** Aramis transports the CO<sub>2</sub> via an offshore pipeline to the offshore distribution platform or earlier branches on the North Sea.

**5 Distribution platform:** via the distribution platform and spurlines, the CO<sub>2</sub> is further transported to the injection platforms of the storage parties.

**6 Platforms and CO<sub>2</sub> storage:** CO<sub>2</sub> is injected by storage companies TotalEnergies, Shell, Eni Energy Netherlands and other storage parties via wells into depleted gas fields where it can be stored 3-4 km under the seabed.

Source: <https://www.aramis-ccs.com/>



# Attero's biogenic credits help meet increasing corporate and regulatory demand in a rapidly growing carbon market.

## Expanding market

The demand for carbon removal solutions is accelerating as both public and private sectors invest heavily to meet global net-zero targets.

## Key players investing in carbon credits

Corporations like Microsoft and Frontier are investing in premium carbon removal credits, indicating serious market demand.

## Regulatory drivers

Tightening regulatory frameworks are increasing the need for verified, long-term solutions like Attero's credits. Many more industries will be regulated in the near future.

## Innovation and Technology

There is a surge in scalable technologies aimed at capturing and storing carbon dioxide. These range from Direct Air Capture (DAC) and BECCS, to nature-based solutions like reforestation and soil carbon sequestration (carbon storage in soils). Attero is frontrunner in BECCS.

# Attero's biogenic credits offer 1,000+ years of certified, permanent carbon removal from Waste-to-Energy processes.

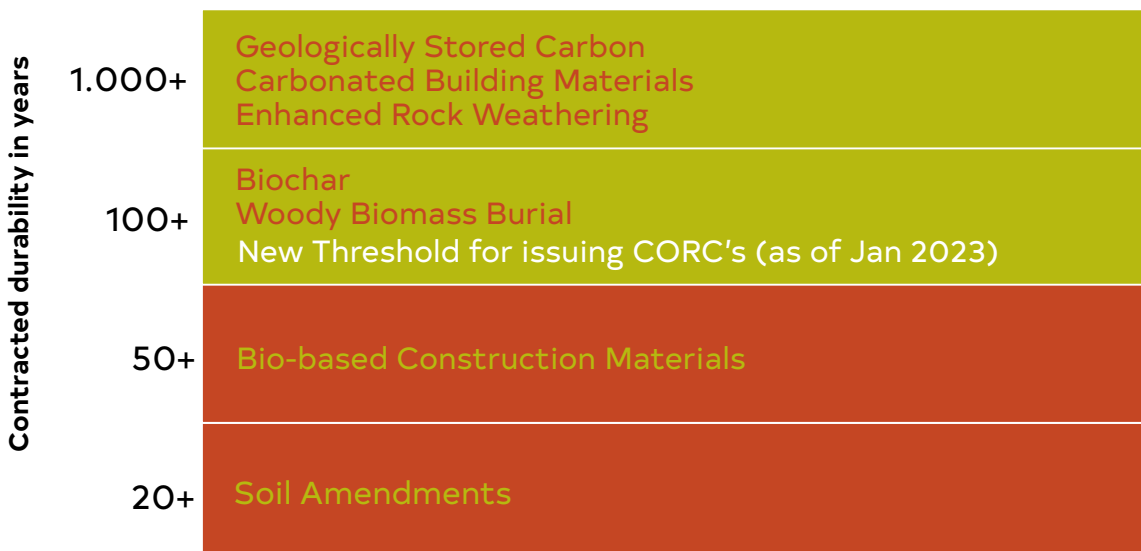
## What makes biogenic credits unique

Biogenic credits are created by capturing CO<sub>2</sub> from organic waste during waste-to-energy processes and storing it permanently in geological formations beneath the North Sea.

## Permanent CO<sub>2</sub> storage

- Attero's biogenic credits provide over 1,000 years of carbon storage. This is a reliable, durable solution compared to nature-based credits, which may be less permanent.
- The geological storage solution has been tested and proven for safety and effectiveness.

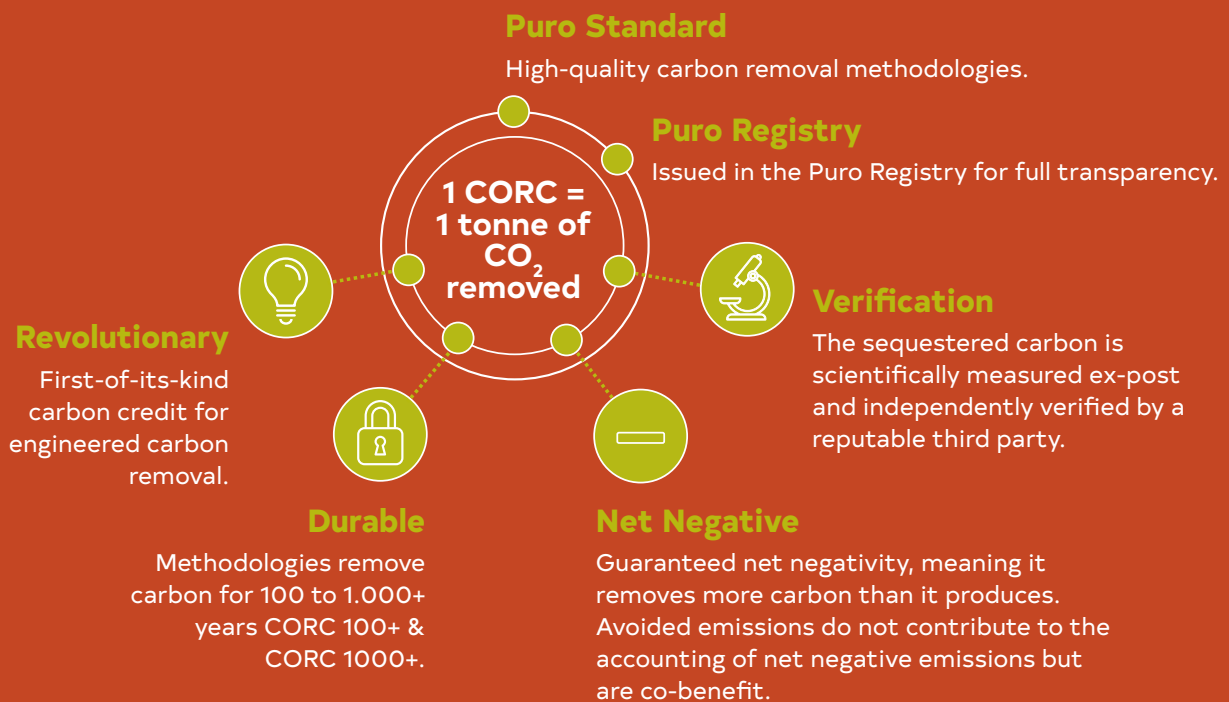
## Puro Standard CORC's durability by methodology



## Attero's biogenic credits solve key corporate challenges around price volatility, greenwashing, and regulatory compliance.

### Addressing corporate challenges

- **Price stability:** long-term contracts protect against carbon market volatility.
- **Greenwashing concerns:** independent certification and the use of municipal waste as source for bio energy provide transparency and credibility.
- **Regulatory alignment:** Attero's credits ensure compliance with current & future carbon mandates.



Source: <https://puro.earth/>

# Biogenic credits offer financial savings, long-term sustainability impact, and brand reputation enhancement for net-zero leaders.

## Financial savings

Long-term contracts lock in current prices, protecting companies from future price hikes in a growing market.

## Sustainability impact

Attero's biogenic credits deliver permanent carbon removal, helping companies meet their net-zero goals and contribute to global decarbonisation.

## Reputational benefits

Certified biogenic credits enhance corporate sustainability profiles, positioning companies as leaders in environmental responsibility.

## 5 ways companies benefit from carbon credits to accelerate decarbonisation and enhance climate leadership.



### Enhance your decarbonisation pathway

By setting a price in emissions and compensating for them.



### Differentiate your business with carbon removal tech

By funding cutting edge decarbonisation solutions.



### Demonstrate immediate climate action

By bridging the gap between current and future results and accelerating net zero.



### Gain an edge through climate leadership

By communicating impact backed by independent carbon removal ratings.



### Secure highly rated credits, today and tomorrow

By tapping into the pre-issuance market and hedging against rising costs.





**Accelerate your  
sustainability journey  
by investing in Attero's  
biogenic credits and  
securing current rates  
before price increases.**

**Your next steps**

- Contact Attero's sales team to explore in more detail how biogenic credits can help your business meet net-zero targets.
- Lock in current rates before the market changes.

**Contact Information**

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Scan and learn more  
about Energy and CO<sub>2</sub>  
on our website