

Simplifying carbon neutrality

**ZeCARB®**

# Hello, we are ZeCarb.



Global reach for CO<sub>2</sub> capturing.



70 years of experience in the carbon capture Business.



Capable of capturing from different CO<sub>2</sub> sources and capacities.



Partner for all questions on CO<sub>2</sub> extensive partner network.

**70+ years**

experience in carbon capture projects.

**30+**

countries in which our solutions have been implemented

**300+**

Carbon capture plants installed worldwide.

## ZeCarb stands for "Zero Carbon".

We are a specialized unit by Messer assembled to mitigate climate change by CCUS solutions.





# ZeCarb is a brand by Messer Group

## Group sales figures and number of employees 2024:

		Total*
Sales	in billion euro	4,5
EBITDA	in billion euro	1,4
Investments	in million euro incl. IFRIC4	878
Employees	Contractual employment relationships in FTE**	> 11,800

\* Consolidated presentation of Messer (formerly Messer Group and Messer Industries), which includes the former 100 percent equity-accounted investment in Messer Industries and was adjusted for the effects of the acquisition of Messer Industries in November 2023.

\*\* Full Time Equivalent

## About Messer:

Messer is the world's largest privately held specialist for industrial, medical and specialty gases and a highly professional and sustainable global player.

## Products

Messer manufactures and supplies oxygen, nitrogen, argon, carbon dioxide, hydrogen, helium, shielding gases for welding, specialty gases, medical gases and food gases as well as many different gas mixtures.

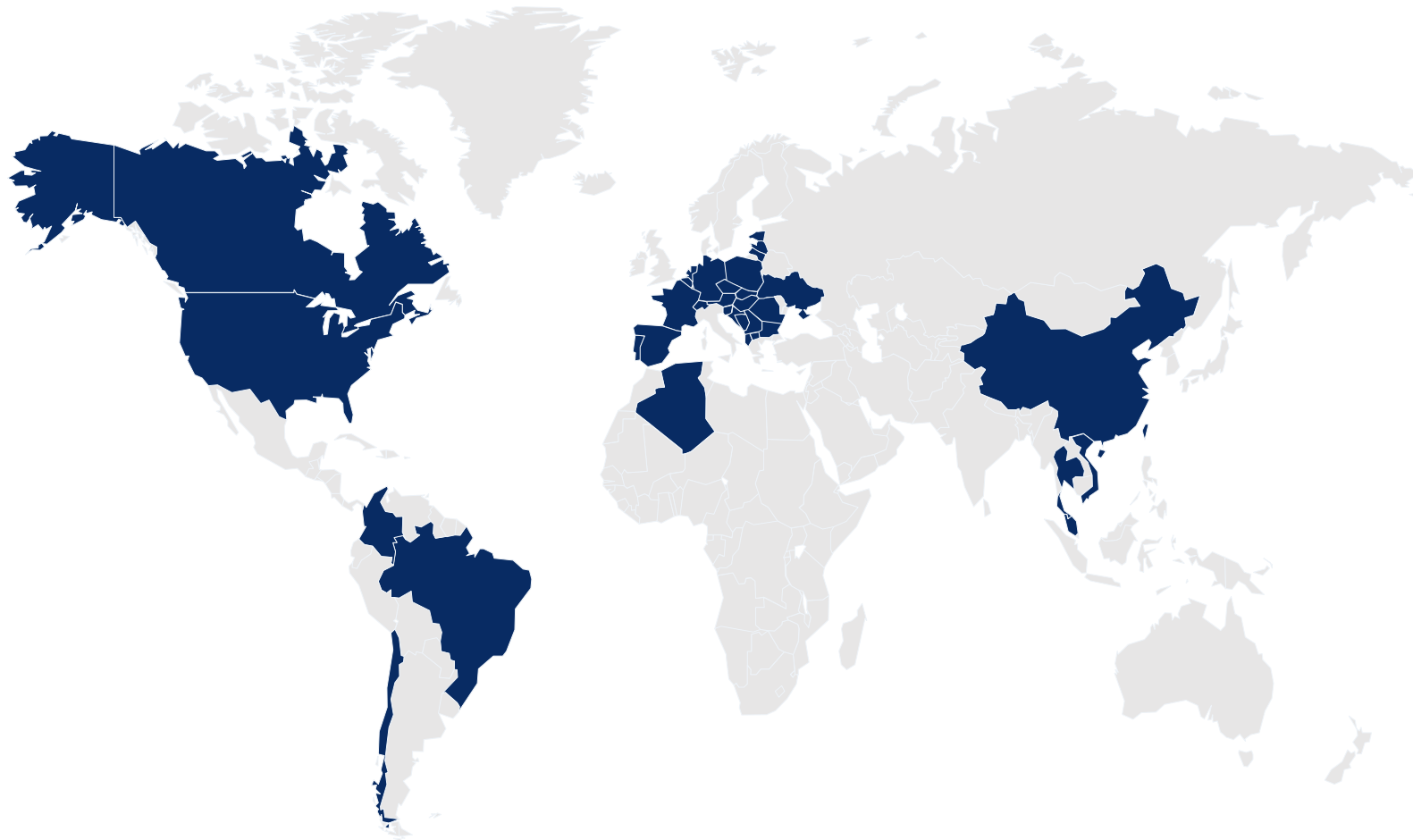
## Customers

Our products are used in industry, environmental protection, medicine, the food and beverage sector, welding and cutting technology, 3D printing, construction, and research and science.

**ZeCARB** Simplifying carbon neutrality.



# Successful in Asia, Europe and the Americas



# Why we act

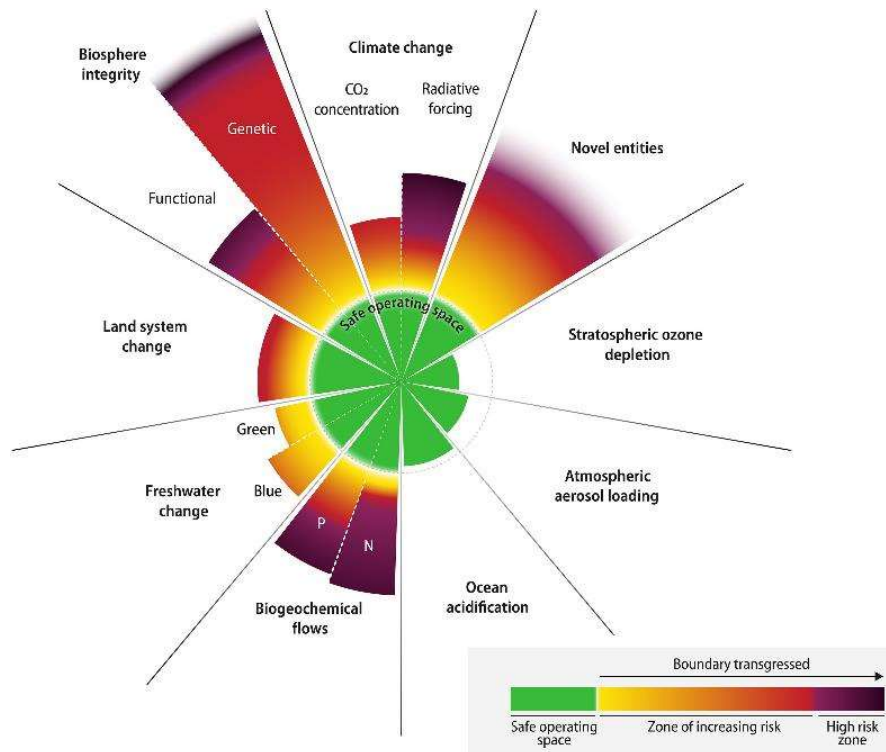




While carbon dioxide is indispensable to life and industry, today's excessive CO<sub>2</sub> emissions caused by human activities are the primary driver of climate change. **ZeCarb will use its decades of experience in the industrial gases sector to support hard-to-decarbonize industries with CCUS solutions.**



# The world is facing a huge challenge



**Wildfires in France.**  
Source: LeMonde



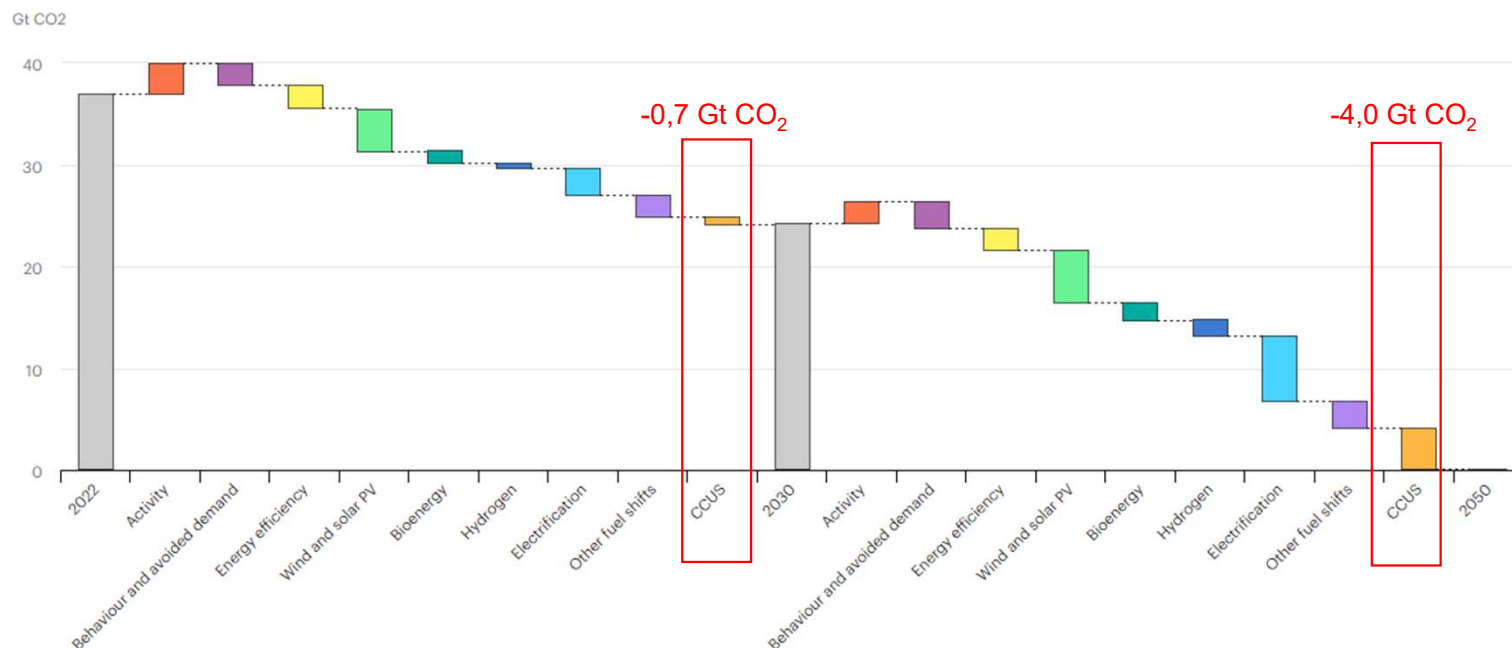
**Floodings in Italy.**  
Source: Reuters



**Droughts in East Europe.**  
Source: Euronews

Source: Richardson K., Steffen W., Lucht W., Bendtsen J. & Rockström J. (13.09.2023) - Science Advances, Vol 9, Issue 7: Earth beyond six of nine planetary boundaries

# CCUS is key to achieve Net Zero targets



In the 1.5°C scenario **CCUS** remains an important component of the global energy transition.

IEA, Emission changes over time by mitigation measure in the Net Zero Scenario, 2022-2050, IEA, Paris <https://www.iea.org/data-and-statistics/charts/emission-changes-over-time-by-mitigation-measure-in-the-net-zero-scenario-2022-2050>, IEA. Licence: CC BY 4.0

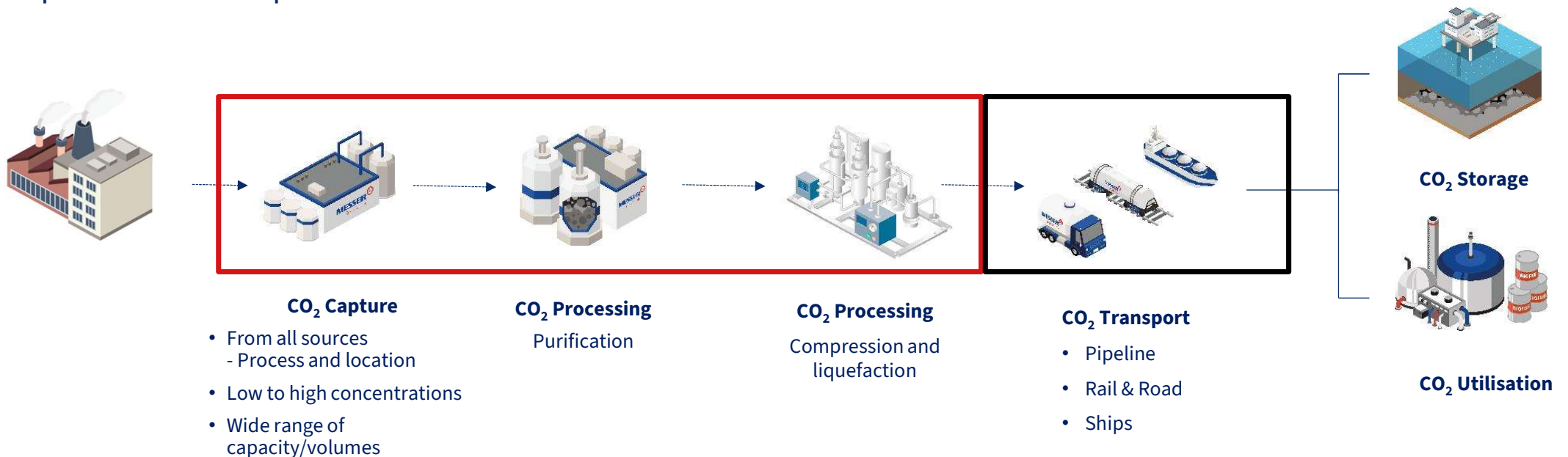




# What we offer

# We simplify carbon neutrality!

ZeCarb offers Carbon Capture as a Service (CCaaS). Our services can be tailor made to your specific carbon capture needs.



=>

**ZeCarb is your single-source solution!**

We unify complex CCUS management processes under one roof!



# We tackle your emission reduction targets together!

You take care of your business. We take care of the whole CCUS process

## Economic stability

- Cost effectiveness
- Market positioning
- Financial security
- Planning security

## Strategic forecast

- Sustainability goals
- Risk mitigation
- Stakeholder engagement
- Image benefit

## Technological Benefits

- Innovation
- Maintenance and support
- Scalability

**Carbon Capture as a Service**  
**(CCaaS) offers various advantages.**







# Our Technologies

# Our carbon capture technologies

## Capture technologies

Developed for low CO<sub>2</sub> concentration sources



### Sources:

Flue Gas, Natural Gas (LPG)  
> 4 % CO<sub>2</sub> in existing flue gas



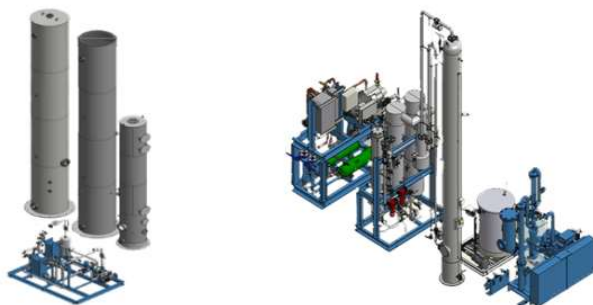
### Capacities:

Standard solutions from 500 bis 25'000 kg/h  
(larger capacities on request)



### Quality:

Capable to exceed ISBT food and beverage standard or any client/transport/sink specifications.



## Processing technologies

Developed for high CO<sub>2</sub> concentration sources



### Sources:

CO<sub>2</sub> from chemical processes e.g. ammonia, ethanol or ethylene oxide production, natural sources etc.



### Capacities:

from 500 to 50'000 kg/h (higher capacities possible upon request)



### Quality:

Capable to exceed ISBT food and beverage standard or any client/transport/sink specifications.



# Selected carbon capture projects



Biorefinery (Crops)  
160'000 TPA



Biogas plant  
4'000 TPA



Stack gas, Methanolprod.  
127'500 TPA



Gas engine, LPG  
34'000 TPA

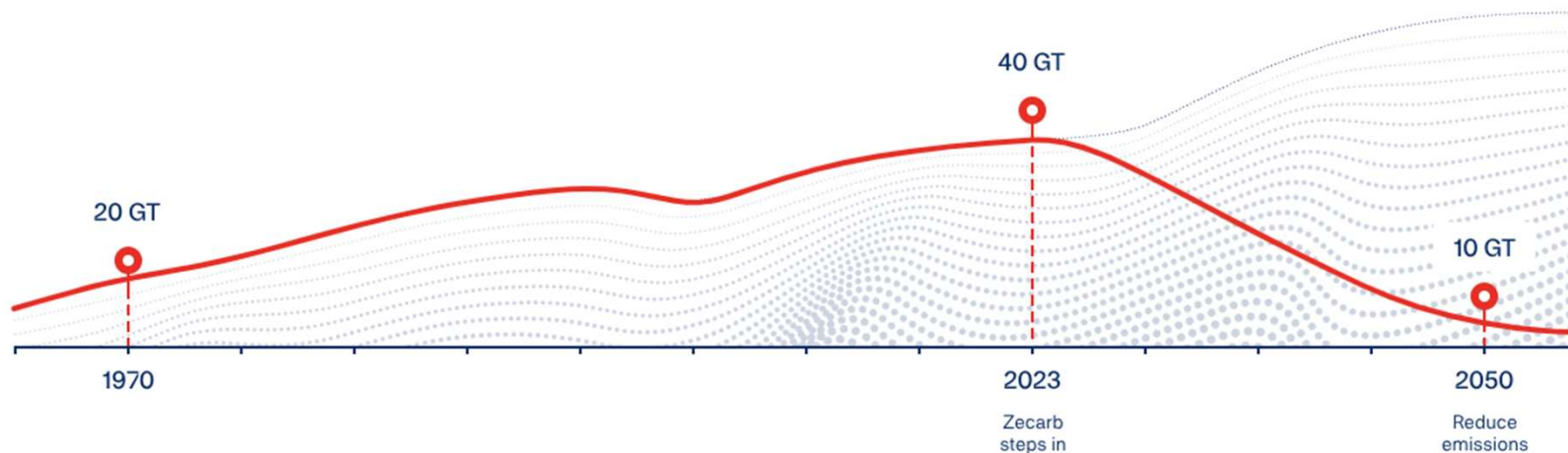




# Who we are

# Our Mission

**We are driven by a mission to achieve a zero-carbon future.** We believe that climate change is the most pressing challenge of our time, and we are committed to playing a pivotal role in addressing it. Our approach is multifaceted, encompassing cutting-edge technologies, comprehensive education, and strategic partnerships.





# Who we help

ZeCarb is your single source solution. Our services can be tailor made to your specific carbon capture needs.



Cement



Bio- and waste to energy



Refineries



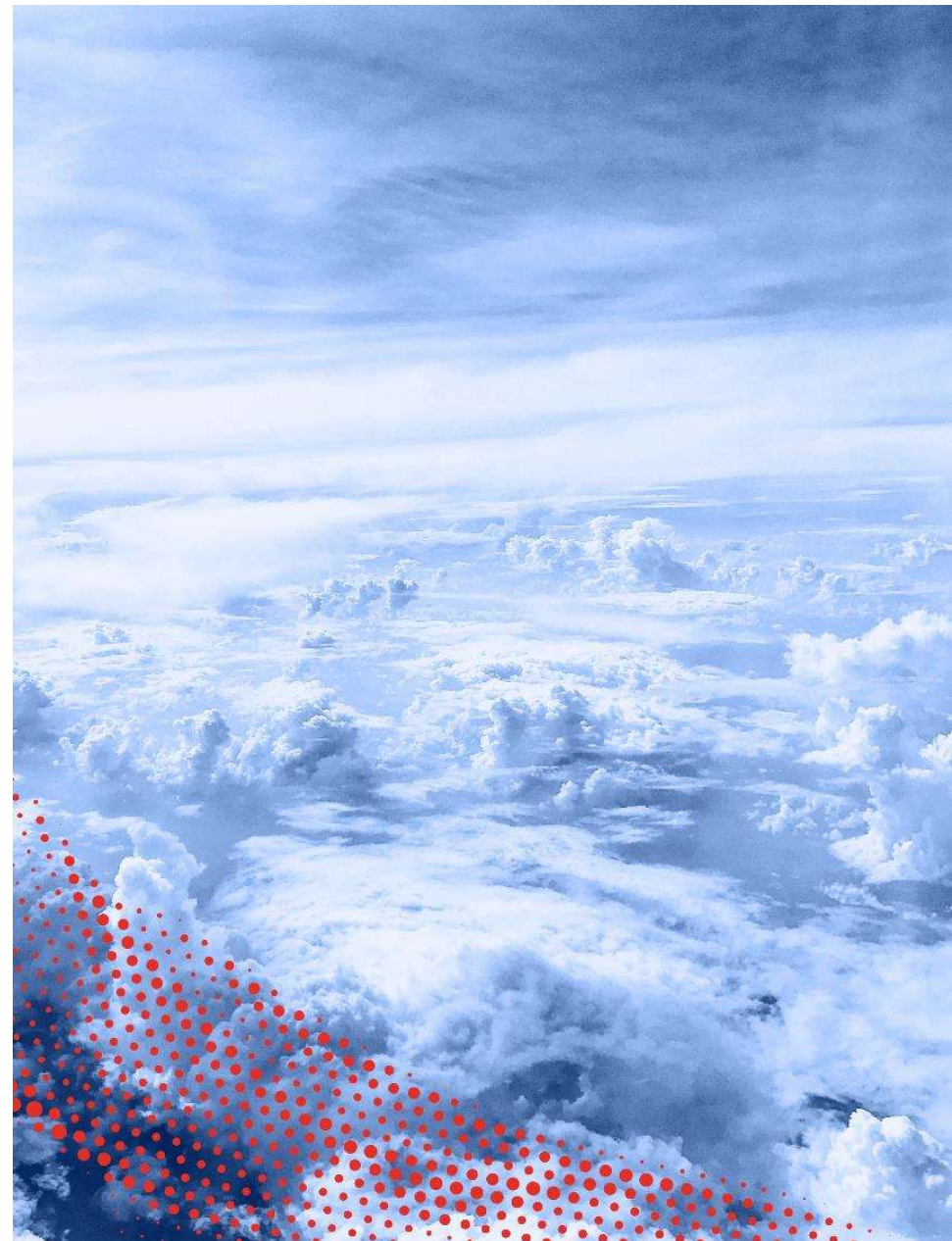
Steel



Gas-to-power

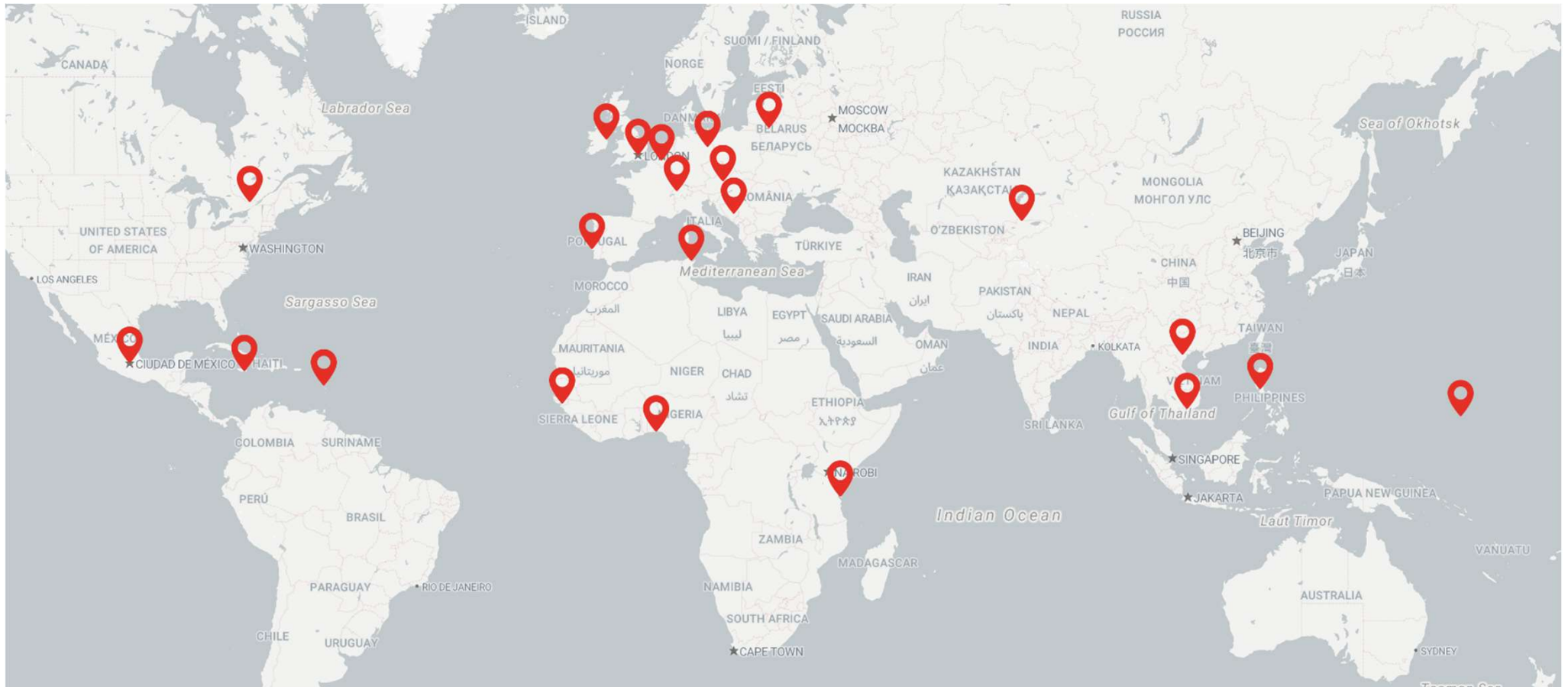


Blue hydrogen





# 300+ carbon capture plants installed worldwide





**You take care of business.  
We take care of net zero.**

# Get in touch!

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