

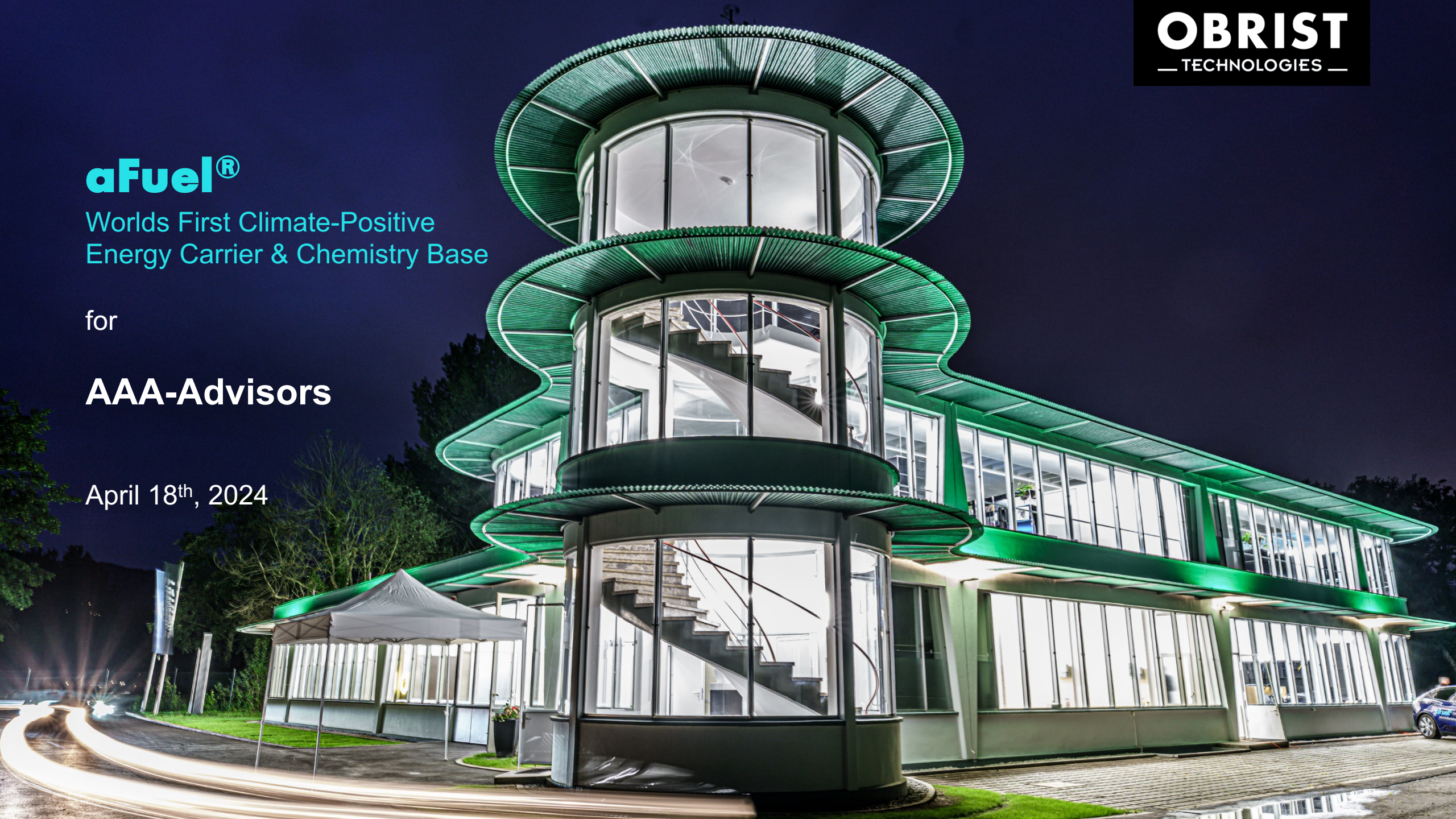
aFuel®

Worlds First Climate-Positive
Energy Carrier & Chemistry Base

for

AAA-Advisors

April 18th, 2024



3rd - Millenium – Doctrine

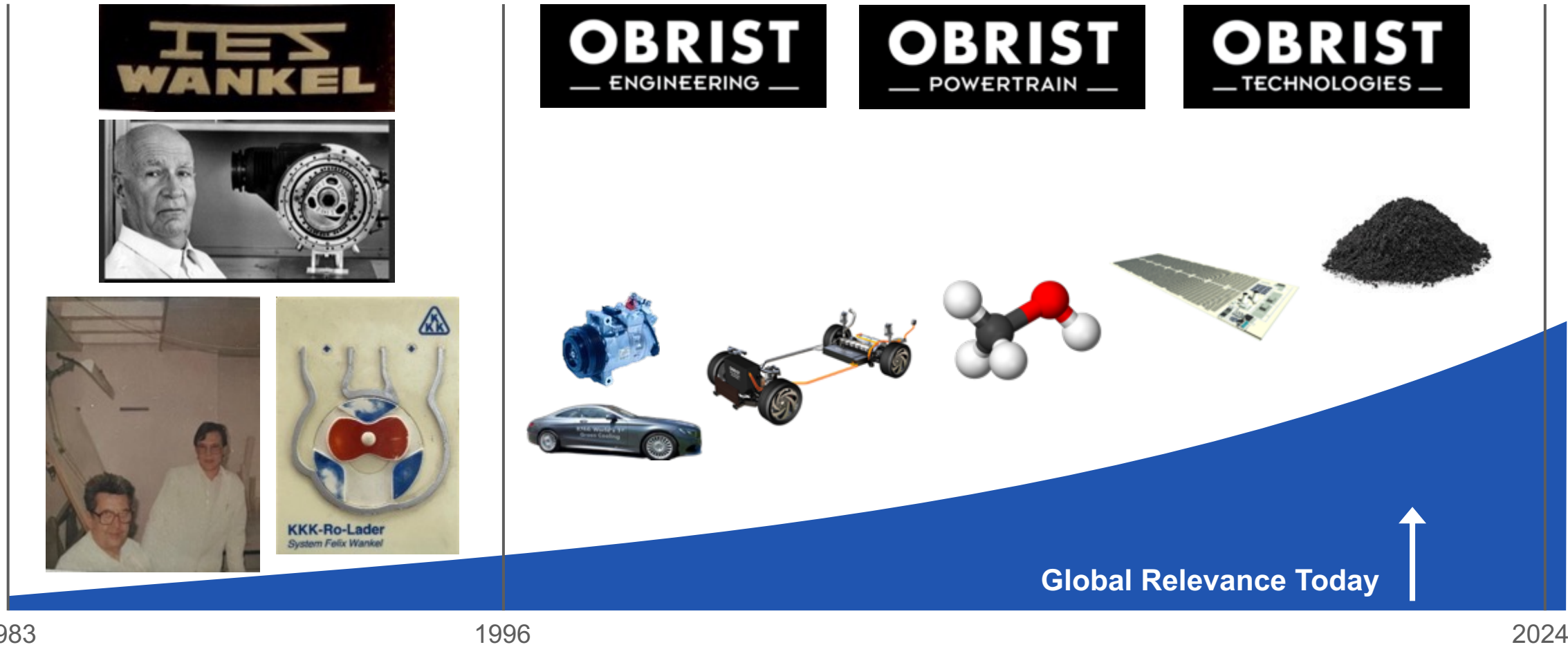
1. Free humankind from fossil energy through liquefied solar power
2. Reduce the global temperature by removing fossil carbon from air
3. Create's food, prosperity and peace for all people on earth

Frank Obrist

April 2024



The Development of Obrist 40 Years of Green Technology for the World



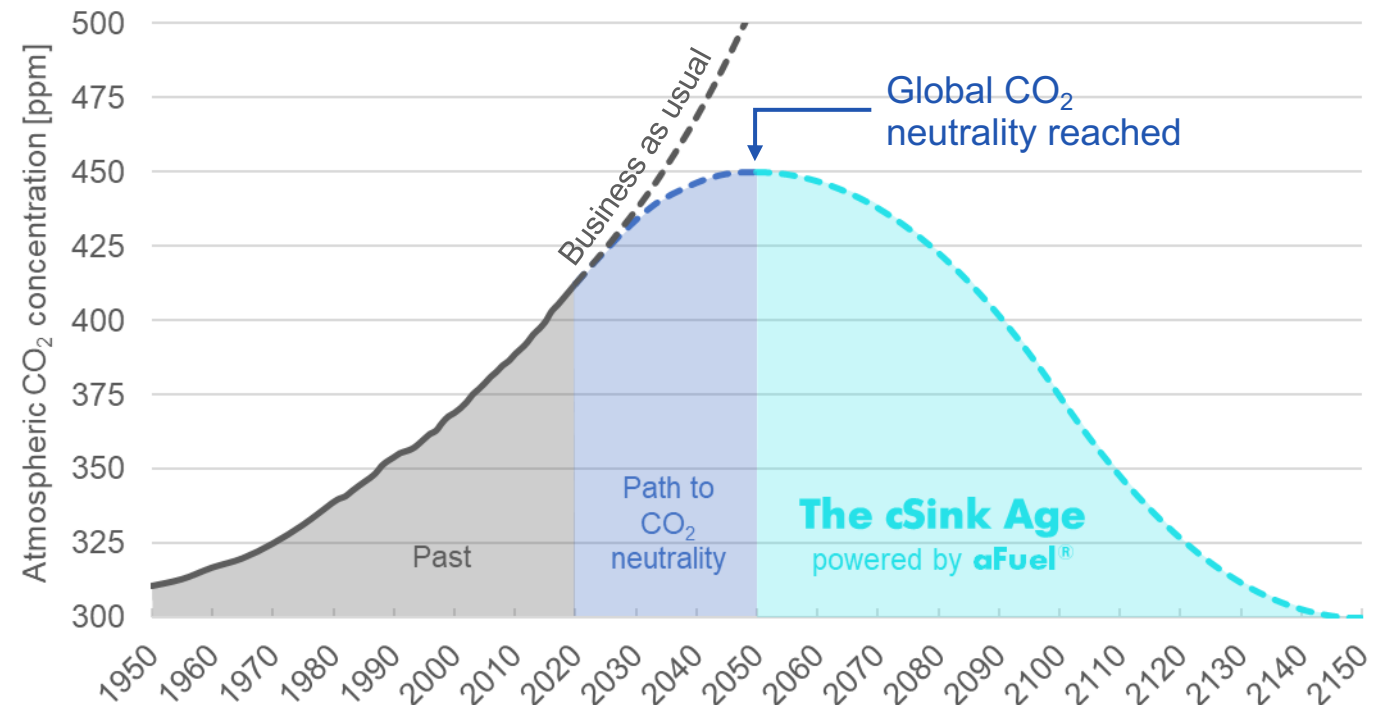
Atmospheric CO₂ Reduction

The Path to Global CO₂ Negativity

After reaching CO₂ neutrality, it is **mandatory to reduce CO₂ levels** in the atmosphere to reverse all damage that humanity has caused over the past centuries

CO₂-Negative = Climate-Positive

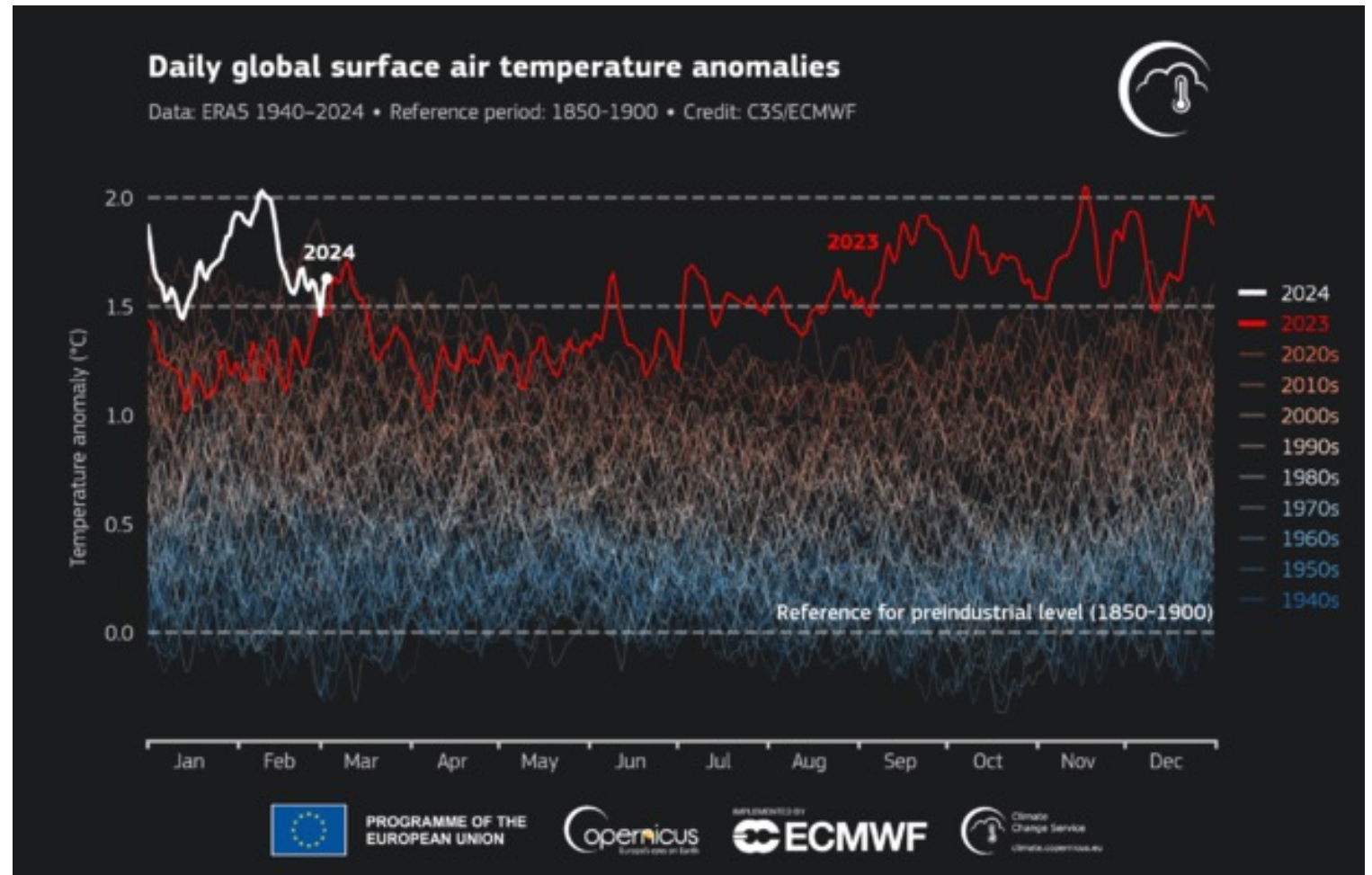
aFuel[®] enables not only CO₂ neutrality, but even **CO₂ negative energy generation**



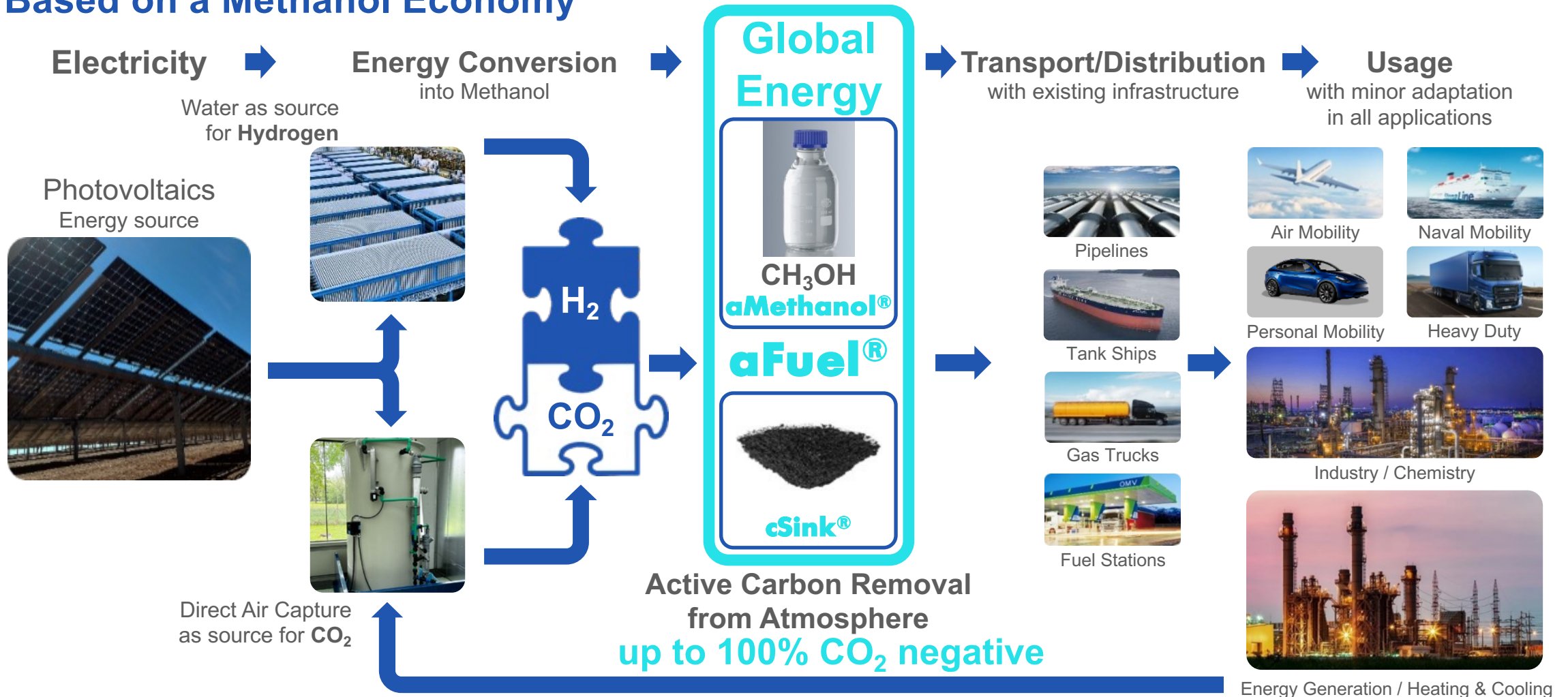
This is the first solution to stop global warming and reverse it!

DD result vers. 1.5°C Global Warming has been surpassed

- Over the last 12 months, global surface air temperature has reached levels over 1.5°C over pre-industrial levels



Renewable Global Energy, but Climate-Positive: **aFuel**[®] Based on a Methanol Economy



aFuel® Carbon Balance by Energy Split Ratios

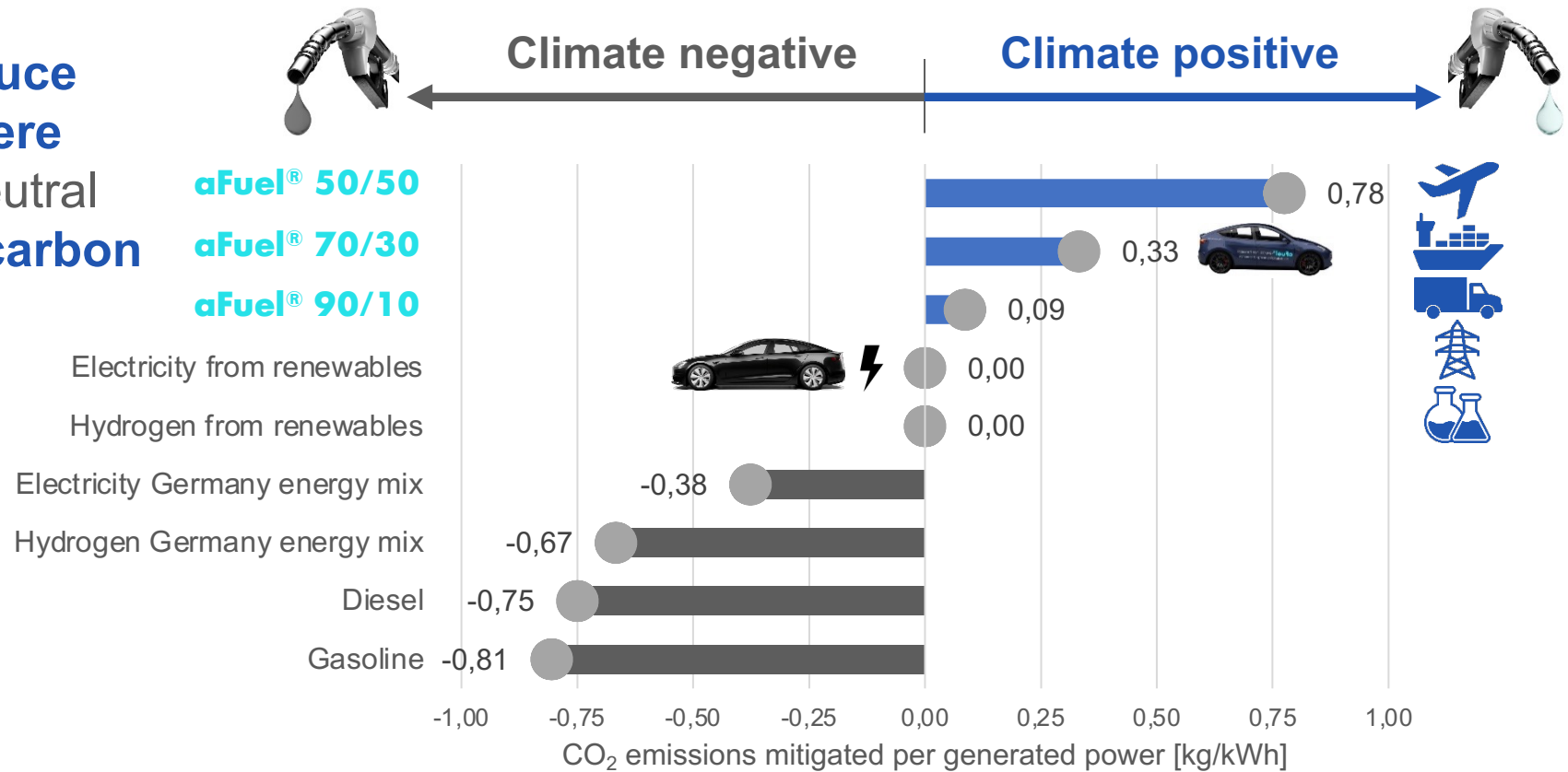
Preferred application from 2027 on

Energy Split Ratio	2030	2040	2050
aFuel® 100/0	aFuel® 90/10	aFuel® 70/30	aFuel® 50/50
aMethanol (contains 297g carbon/liter)	1 Liter cont. 297g Carbon	1 Liter cont. 297g Carbon	1 Liter cont. 297g Carbon
cSink (aCarbon)	0g	46g	176g
Carbon Balance	CO₂ neutral	-15%	-59%

aFuel® World's First Global Climate Positive Fuel

- aFuel®** offers the unique possibility to **actively reduce CO₂ out of the atmosphere** parallel to being a CO₂ neutral energy carrier, making it **carbon negative**

- Other non-carbon-based energy carriers **can only be CO₂-neutral**



aMethanol[®] Very Easy and Broad Application



aMethanol[®]

Derivatives

- Plastics
- OME
- DMC
- MeFo
- MTBE
- eGasoline
- SAF



Replace Fossil Energy 84.3% of Primary Energy

Oil

- Gasoline
- Diesel
- Jet Fuel



Gas

- Thermal Power Plants
- Heating

Coal

- Thermal Power Plants
- Industry

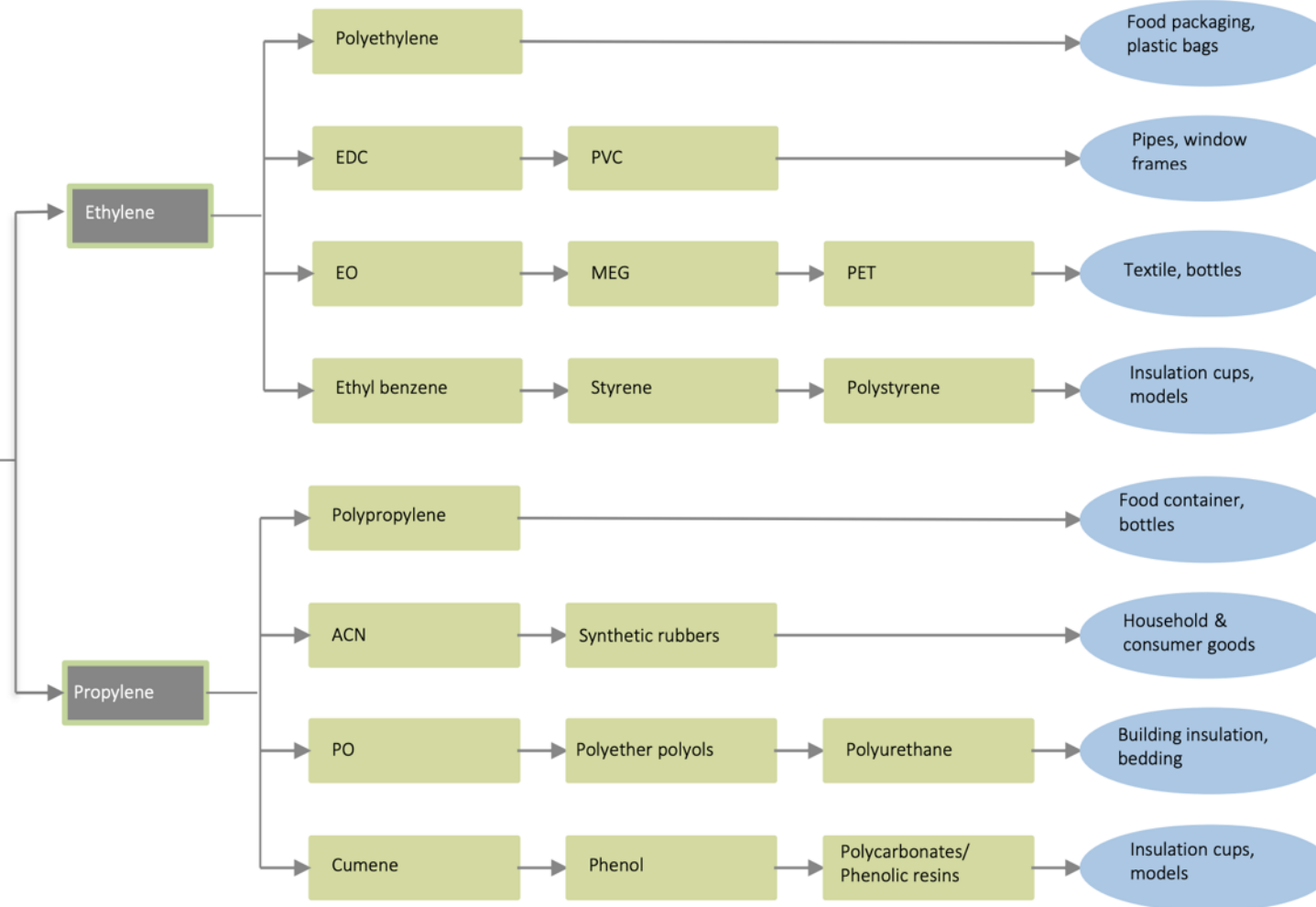
cSink[®]

- Activated Carbon Production
- Soil Fertilizer
- Graphite Production (Batteries, ...)
- Indefinite, Easy and Safe Storage

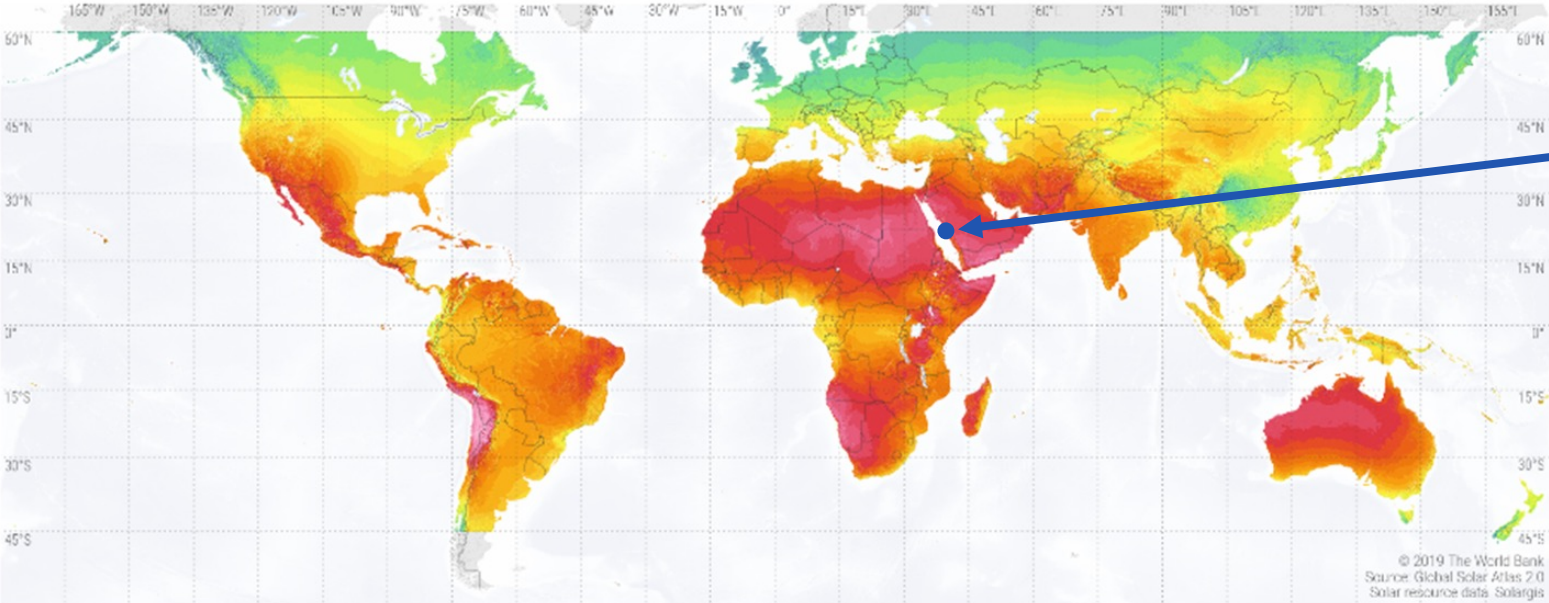


aMethanol® & aFuel® Very Easy and Broad Application

aFuel®



Photovoltaics in Sun Belt Cheapest Energy worldwide



Shuaibah, Saudi Arabia
600MWp
2400kWh/m² irradiance

0.88 ct/kWh

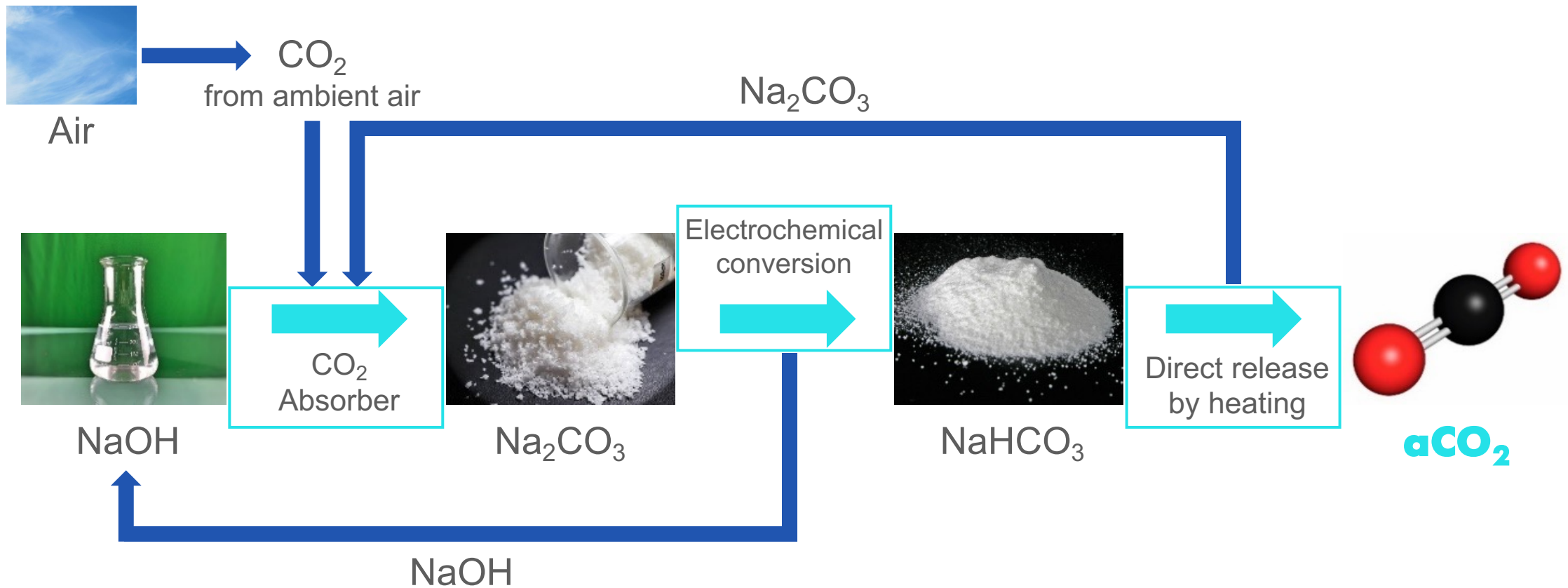
Lowest LCOE worldwide
(April 2021)

	2.2	2.6	3.0	3.4	3.8	4.2	4.6	5.0	5.4	5.8	6.2	6.6	7.0	7.4
Daily totals:														
Yearly totals:	803	949	1095	1241	1387	1534	1680	1826	1972	2118	2264	2410	2556	2702

kWh/m²

OBRIST DAC[®] Process Overview

CO₂ Capture, Electrochemical Conversion & Thermal Decomposition



OBRIST DAC[®] - Technology

Door Opener for all Synthetic Fuels of the future

Breakthrough with **OBRIST DAC[®]**:

only 14 €/t CO₂ Energy Cost for clean CO₂ reached

Retrieve CO₂ and Water from the atmosphere
even in the Earth's Solar Belt

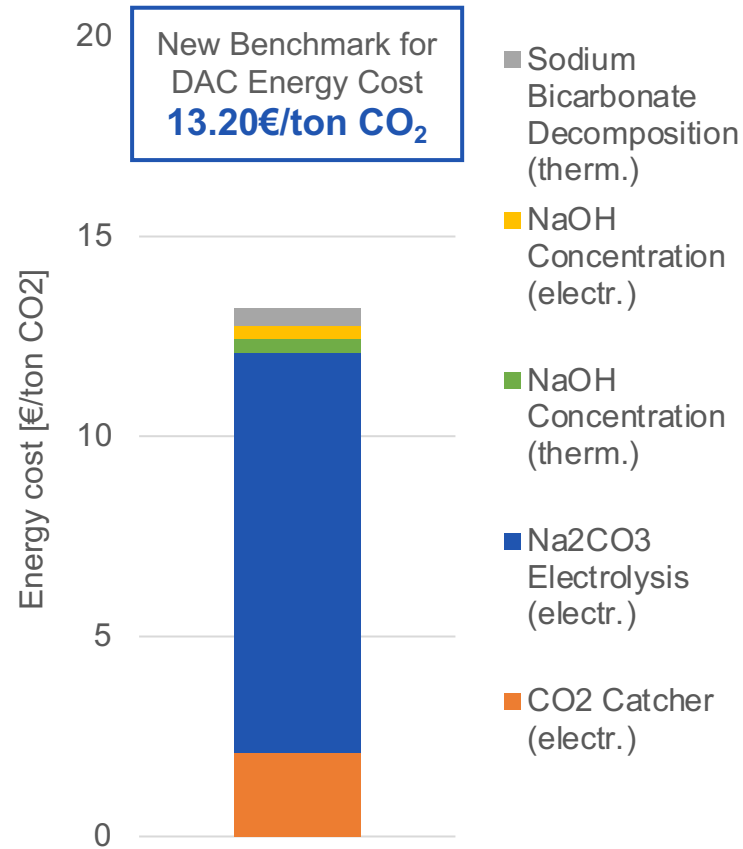
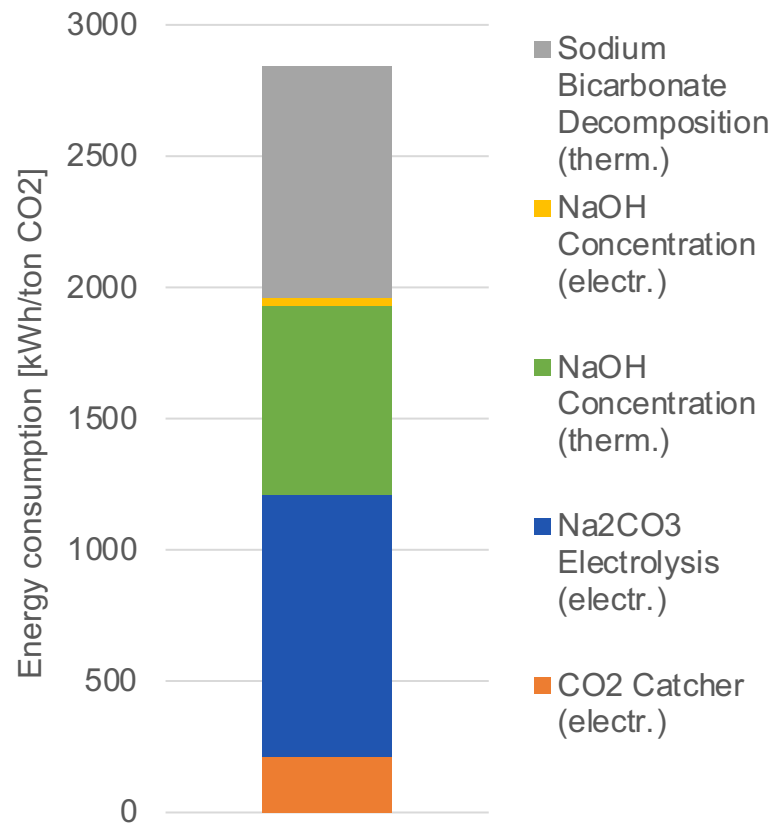
Allows a Production of **Carbon** from the atmosphere
with the **cSink[®]** process and the

Worlds first **Climate Positive** global Energy Carrier
aFuel[®] (aMethanol[®] & cSink[®])



Technology proven in OBRIST DAC[®] Laboratory

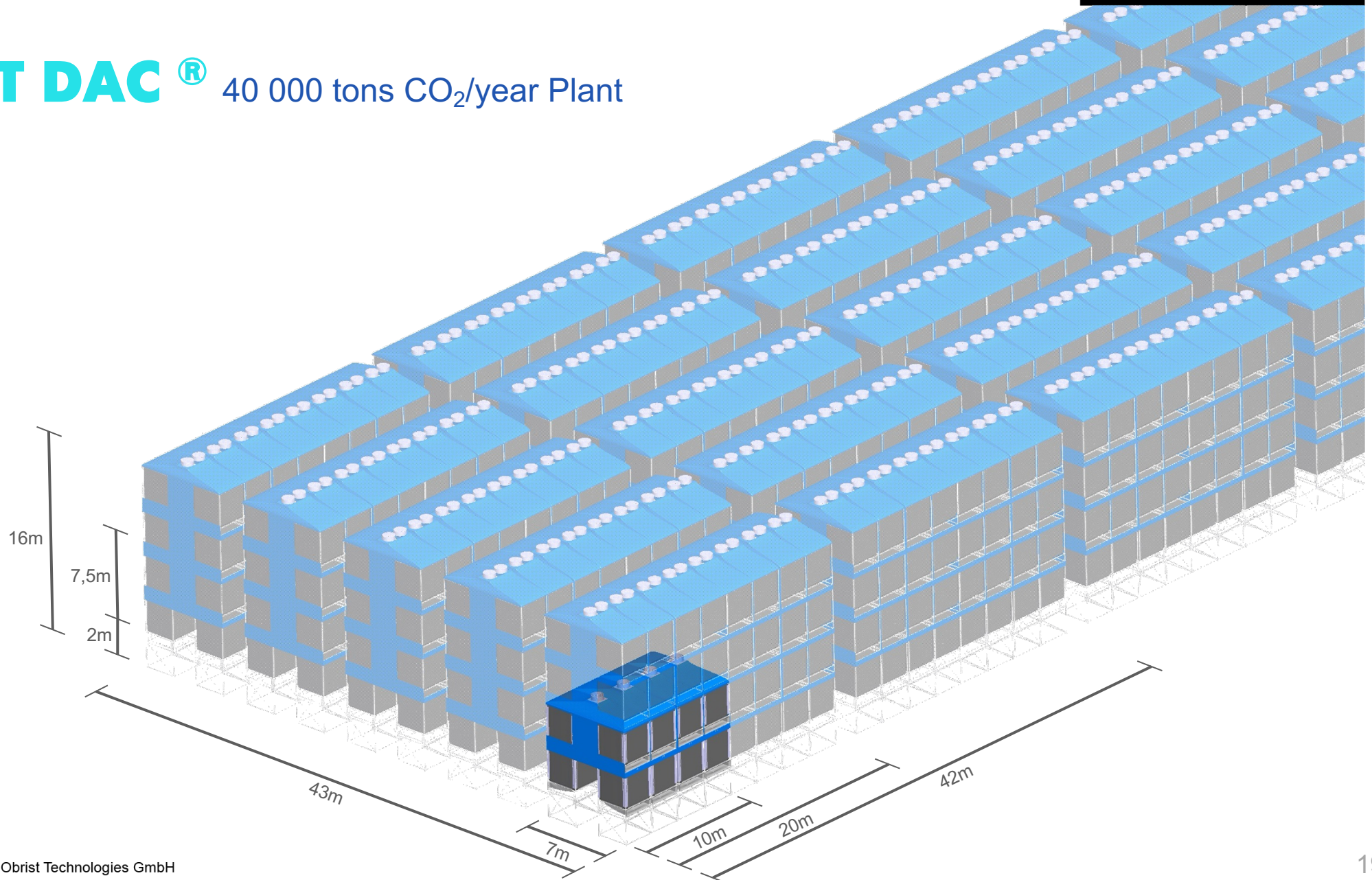
OBRIST DAC[®] Energy Consumption & Cost at aFuel[®] Plant - Earth's Sun Belt



OBRIST DAC® Demo Catcher 2.0



OBRIST DAC[®] 40 000 tons CO₂/year Plant



CO₂-to-Methanol Synthesis Carbon Recycling International Plant

- Carbon Recycling International has commissioned the first industrial-scale „Emissions-to-Liquid“ plant, the world’s largest CO₂-to-Fuel production
- 110,000 tons of green Methanol per year, 160,000 tons of CO₂ per year used
- Investment of 90 million USD for the plant

→ **Benchmark for industrial methanol production**

→ **Maturity of CO₂-to-Methanol is good**



Giga Plant

aFuel® World's first climate-positive Energy Carrier

OBRIST
— TECHNOLOGIES —

PLANT SPECS

Plant Size: 280km²

Peak Power: 28.4 GW_p

(Modular Plant Design)

CAPEX: approx. 18.6b\$

OPEX: approx. 240m\$/year

Sales: approx. 4.3b\$/year

License RR-Fee: 1%

OUTPUTS

aMethanol®

3 963 900 tons/year

aCarbon®

228 700 tons/year

aOxygen®

6 549 700 tons/year

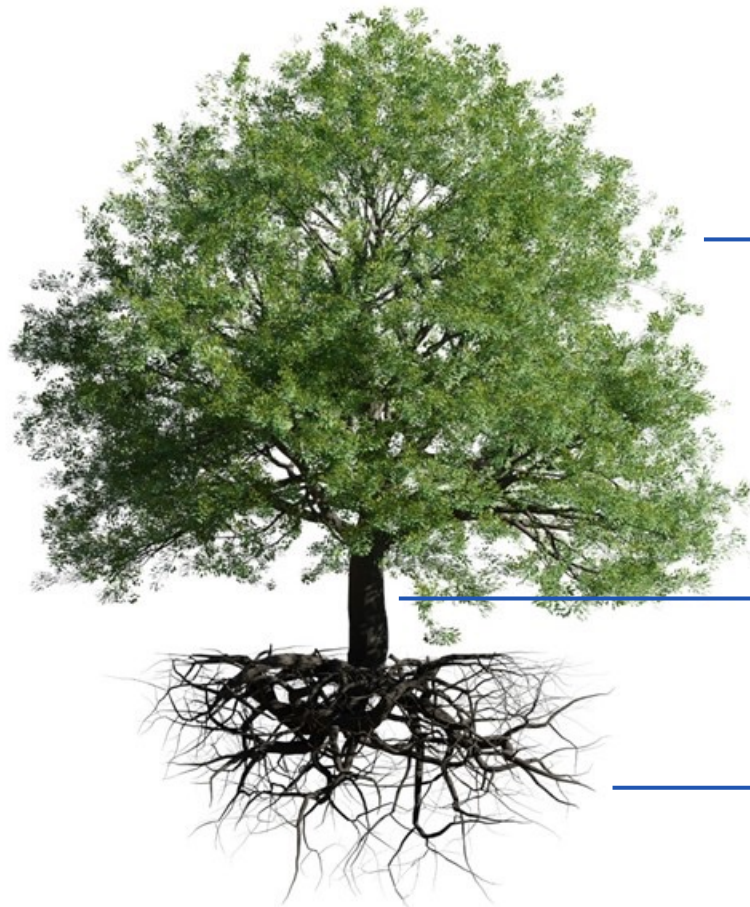
Carbon Dioxide Credits - Volume

6 289 000 tons/year

The Modern Forest

Inspired by nature, but much more efficient and faster than „Mother Nature“

**Our Inventions,
our USPs**



————— **CO₂ Capture** —————



OBRIST DAC[®]

————— **HC Storage** —————



aMethanol[®]

————— **Carbon Storage** —————



cSink[®]

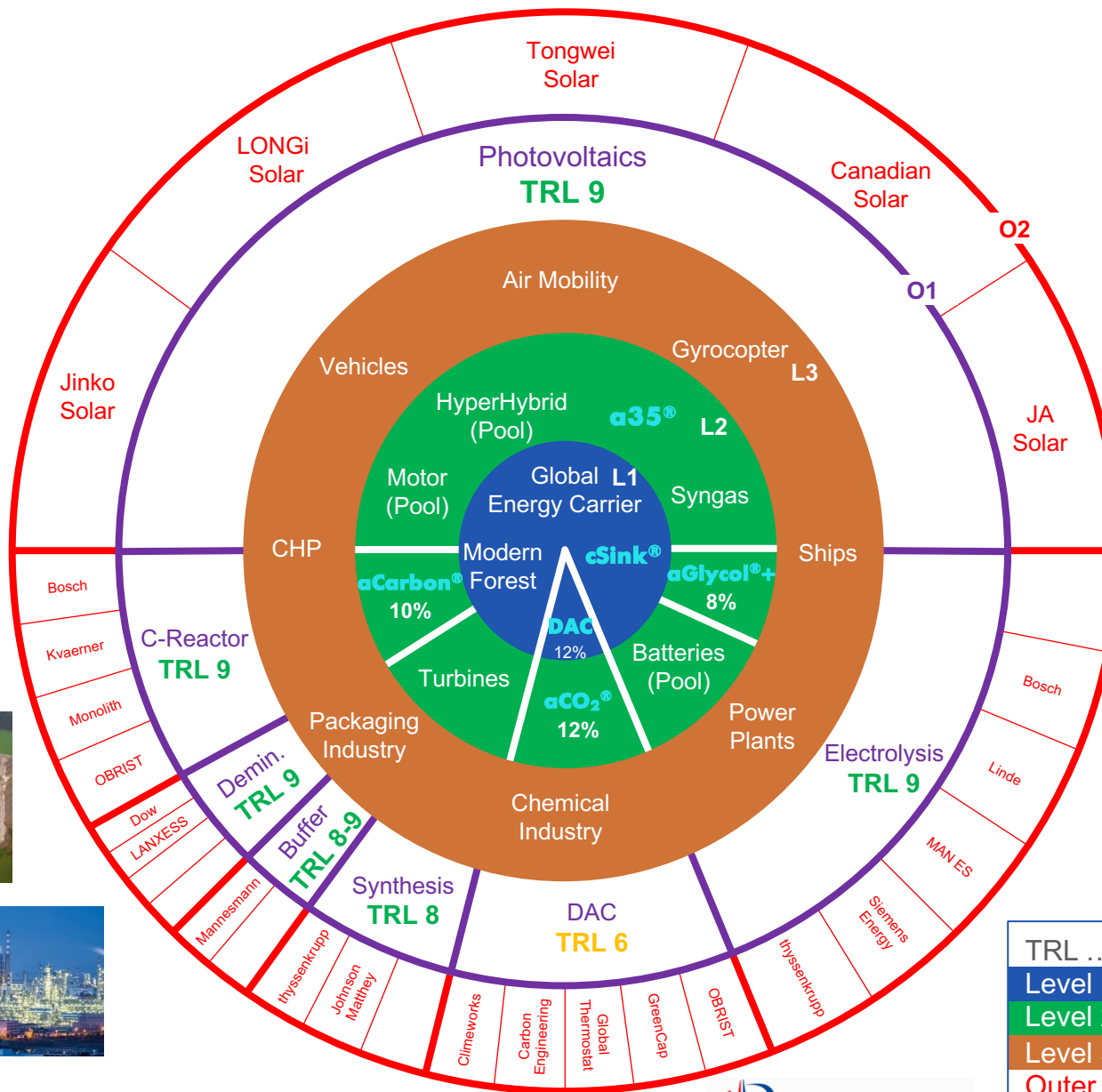
aFuel[®] = aMethanol[®] & cSink[®]

IP-Pool incl.
39 Patent Families
190 Single Patents

MONOLITH™



JM Johnson Matthey
Inspiring science, enhancing life



JinKO Solar



thyssenkrupp



OBRIST
— TECHNOLOGIES —

TRL ... Technology Readiness Level
 Level 1: Core Patents / Pools
 Level 2: Conversion Patents / Pools
 Level 3: Application Patents / Pools
 Outer Levels: Production Technologies

**Feb. 2023: 39 Patent Families,
190 Patents in Levels L1, L2, L3**

Fast Green Track applied
CNIPA
China National Intellectual Property

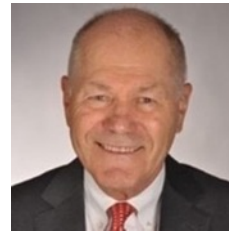
Source: [US Department of Energy](#), [IEA-RETD](#), [Monolith](#), [IRENA](#), [Viebahn et al \(2019\)](#), [Aquatech](#), [Wassermann et al \(2020\)](#)

Experts, Network and Supporters

- Backed and supported by world-leading scientists



Prof. Schlögl



Dr. Jacob



Prof. Radermacher



Prof. Basseur



Prof. Tillmetz

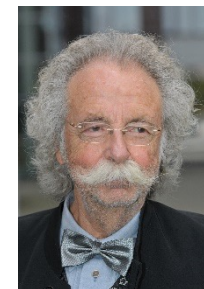


Prof. Olsowski

- Supported by United Nations, Governments and Celebrities



Dr. Gerd Müller, UNIDO



Jean Pütz

- Media: NZZ, FAZ, Welt, 3Sat, N24, ARD.....
- Cooperation with world-leading Companies



Minister Karliczek, BMBF



Chancellor Karl Nehammer

Potential Licensees Companies/Industries

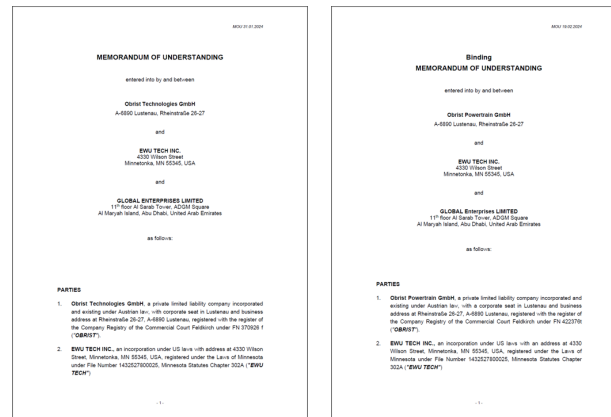
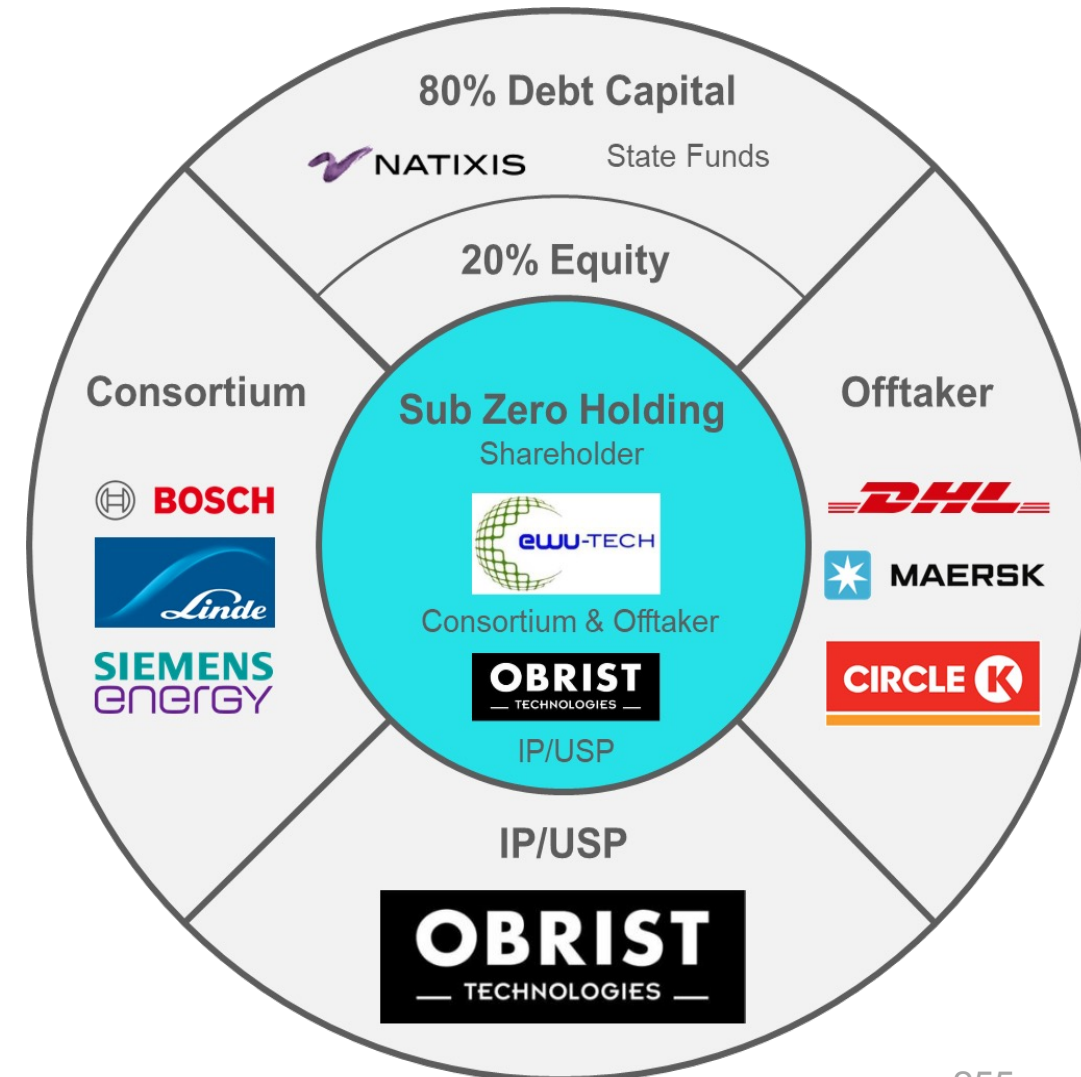
Maersk has ordered **several methanol-powered vessels**, secured **all green methanol production until 2027**



Area	Big Oil	Power Plants Electricity	Automotive	Trucks	Aviation	Shipping	Chemistry	Industry Leader	System Producer
Preferred Flagship Licensees									

MoU on **Sub Zero Fund** and **Sub Zero Mobility Fund**

- MoU signed between OBRIST Technologies, EWU Tech Inc. And Global Enterprises Limited, an investment management company in the UAE
- GEL is in the process of setting up investment funds focused on the support of **aFuel®**, **cSink®**, **OBRIST DAC®** technologies (**Sub Zero Fund**), as well as the mobility technologies of OBRIST (**Sub Zero Mobility Fund**)



„Together we will create a sustainable future and a business case for us and generations to come.“

CEO Frank Obrist
OBRIST Technologies GmbH

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