

aFuel®

Worlds First Climate-Positive
Energy Carrier
based on H₂

for

h2connect.com

Spielbank Lindau

Frank Obrist
CEO & Founder

July 21th, 2023



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

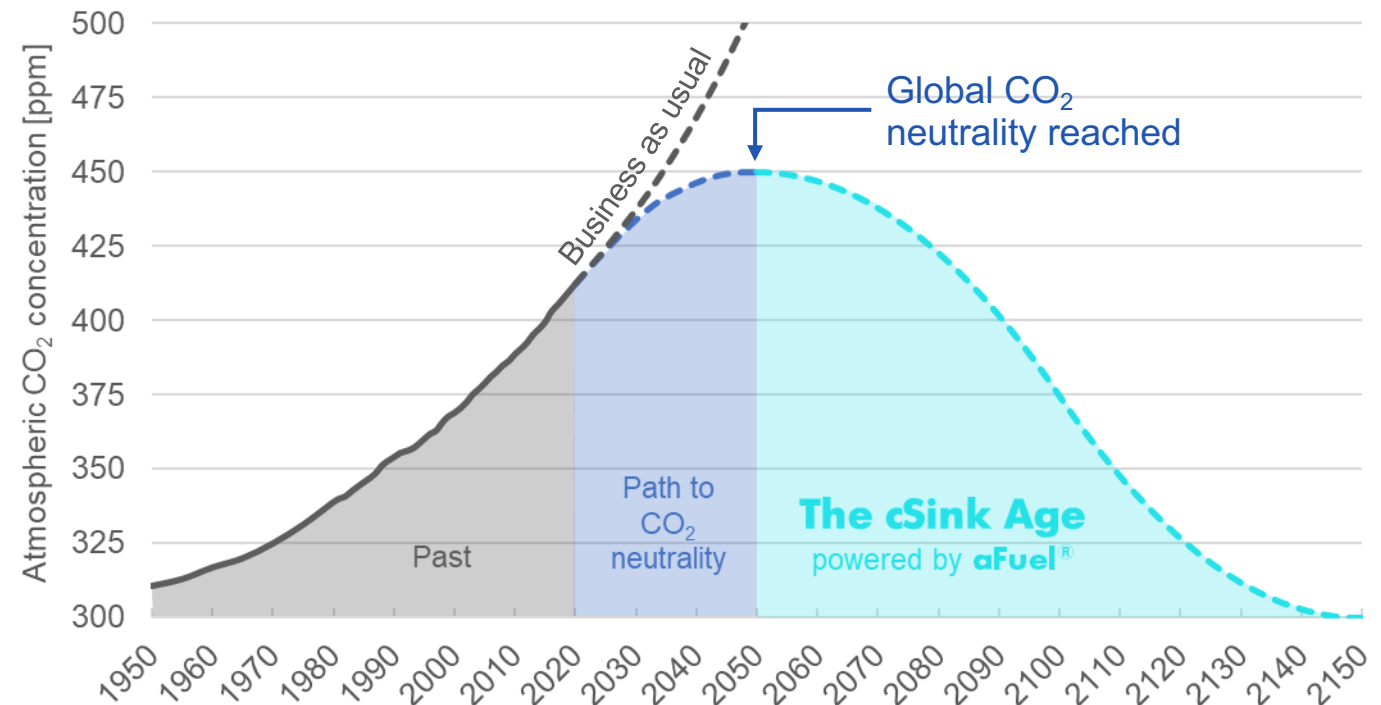


Atmospheric CO₂ Reduction The Path to Global CO₂ Negativity

- 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**

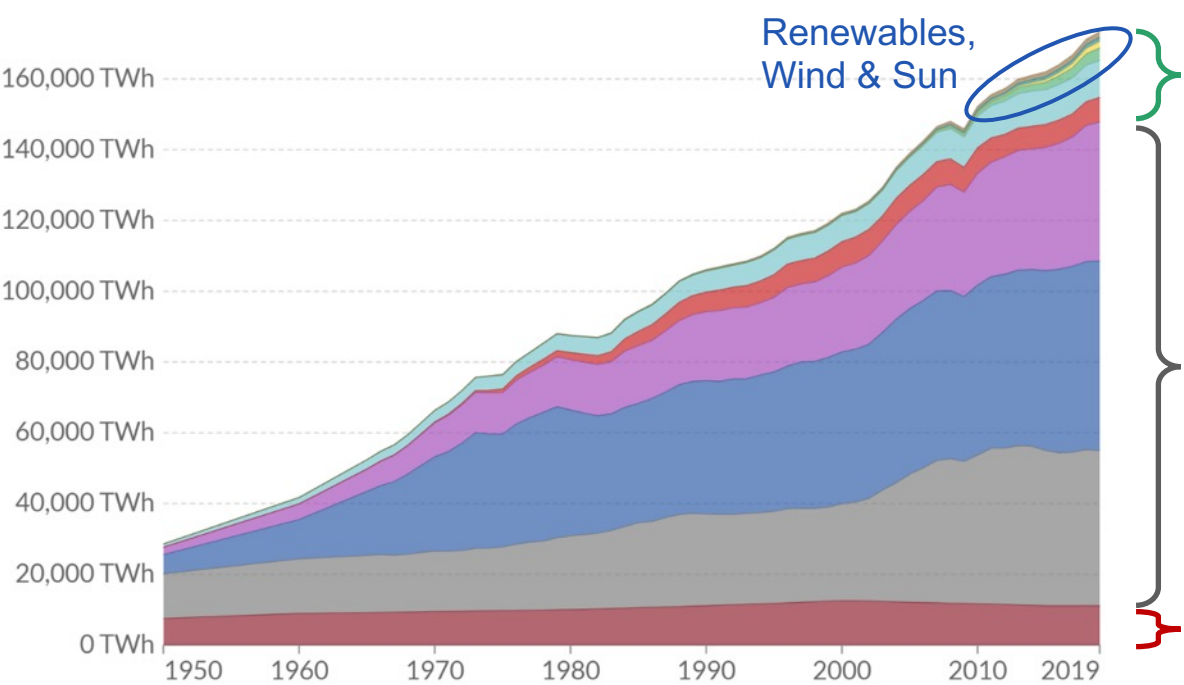


This is the first solution to stop global warming and reverse it!

Fossil & Renewable Energy Status Quo

Global primary energy consumption by source

Primary energy is calculated based on the 'substitution method' which takes account of the inefficiencies in fossil production by converting non-fossil energy into the energy inputs required if they had the same conversion losses: fossil fuels.



CO₂ neutral:
15.7%
(25 400 TWh)

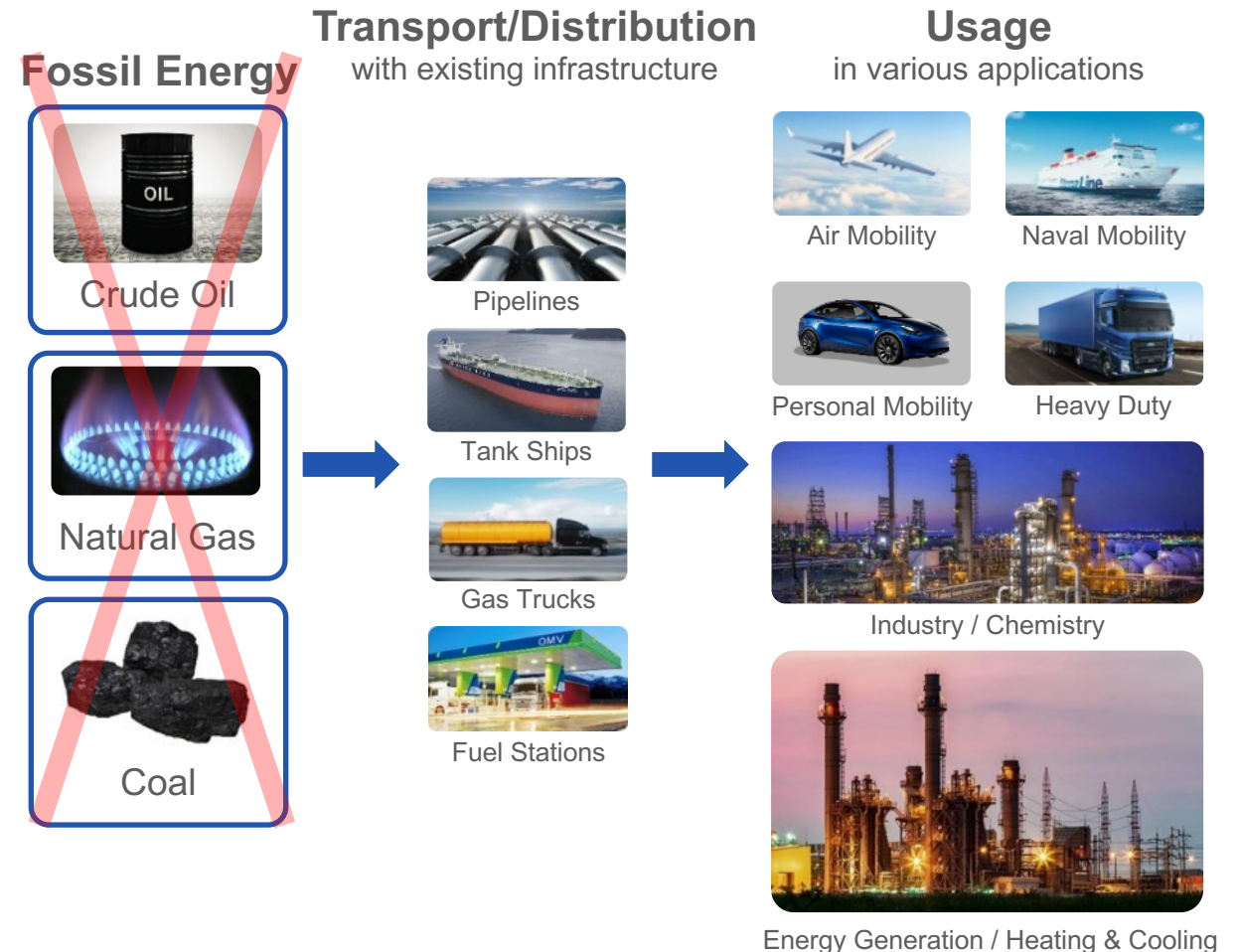
Fossil/CO₂ positive:
84.3%
(136 800 TWh)

Traditional Biomass
(11 100 TWh)
(not addressed since fossil CO₂ neutral)



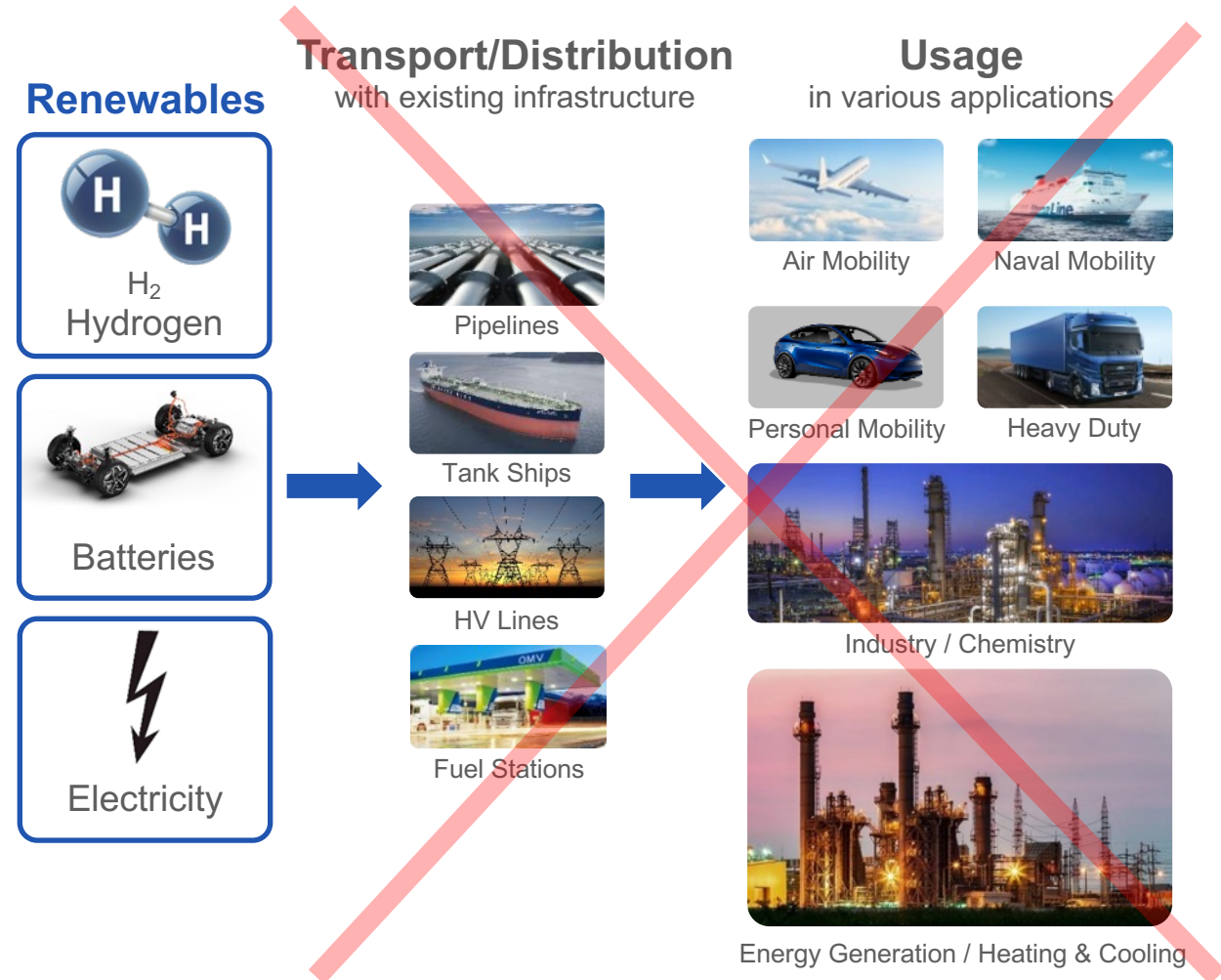
Global Energy, but fossil

- Current global energy system is largely based on three main fossil energy carriers **crude oil**, **natural gas**, and **coal**.
- Global infrastructure for our global energy system has been developed for **decades and centuries**
- Global fossil energy demand is not only based on mobility, but also all forms of **industry** and **residential applications**



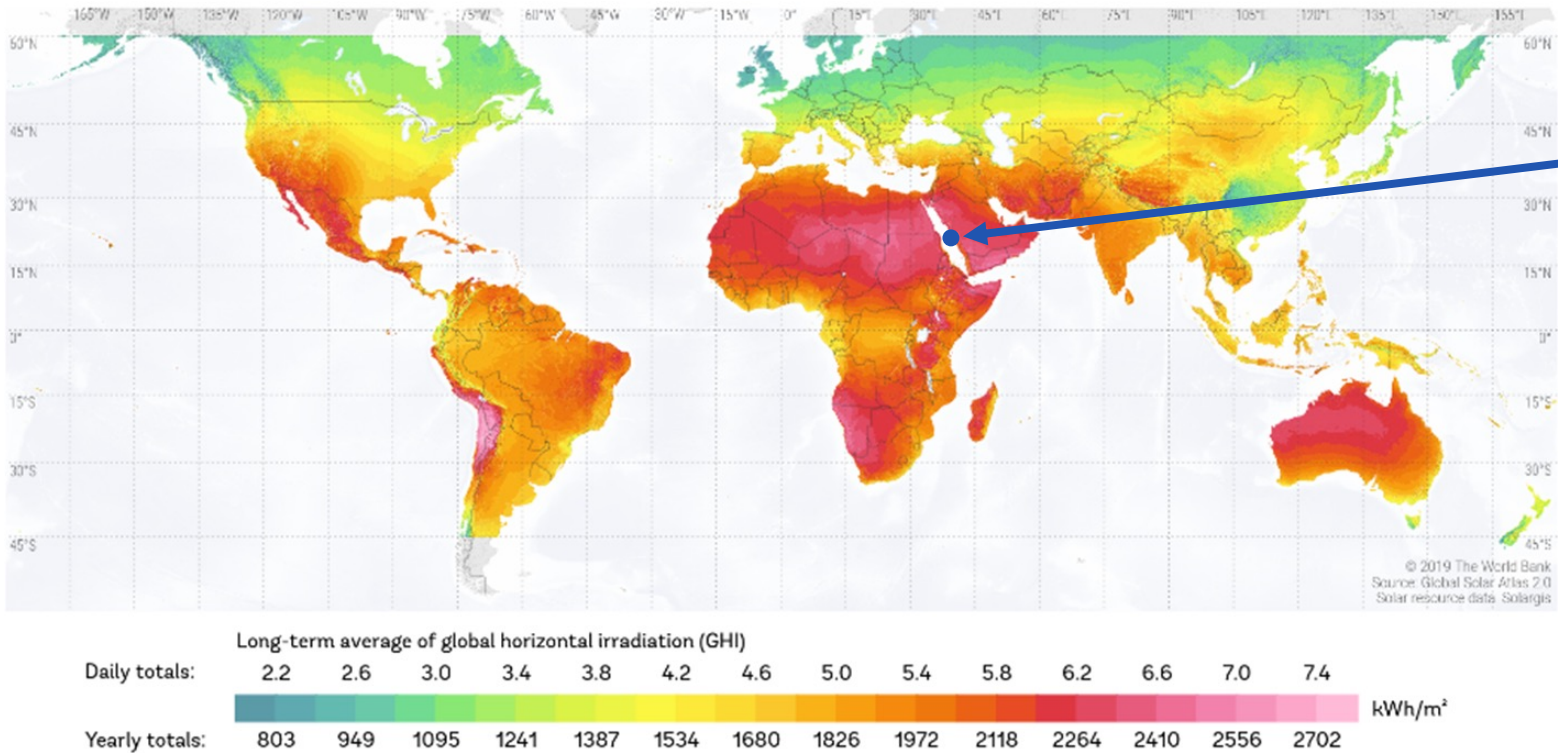
Political Energy & Climate Goals, but ...

- Goals and pathways provided by political decision makers **never reached**
- Proposed solutions (BEV, hydrogen, and others) are **not** a sustainable global path into the future
- Apart from resource and applicability constraints, the infrastructure is **not present** and will take **decades to adapt**



Photovoltaics in Sun Belt

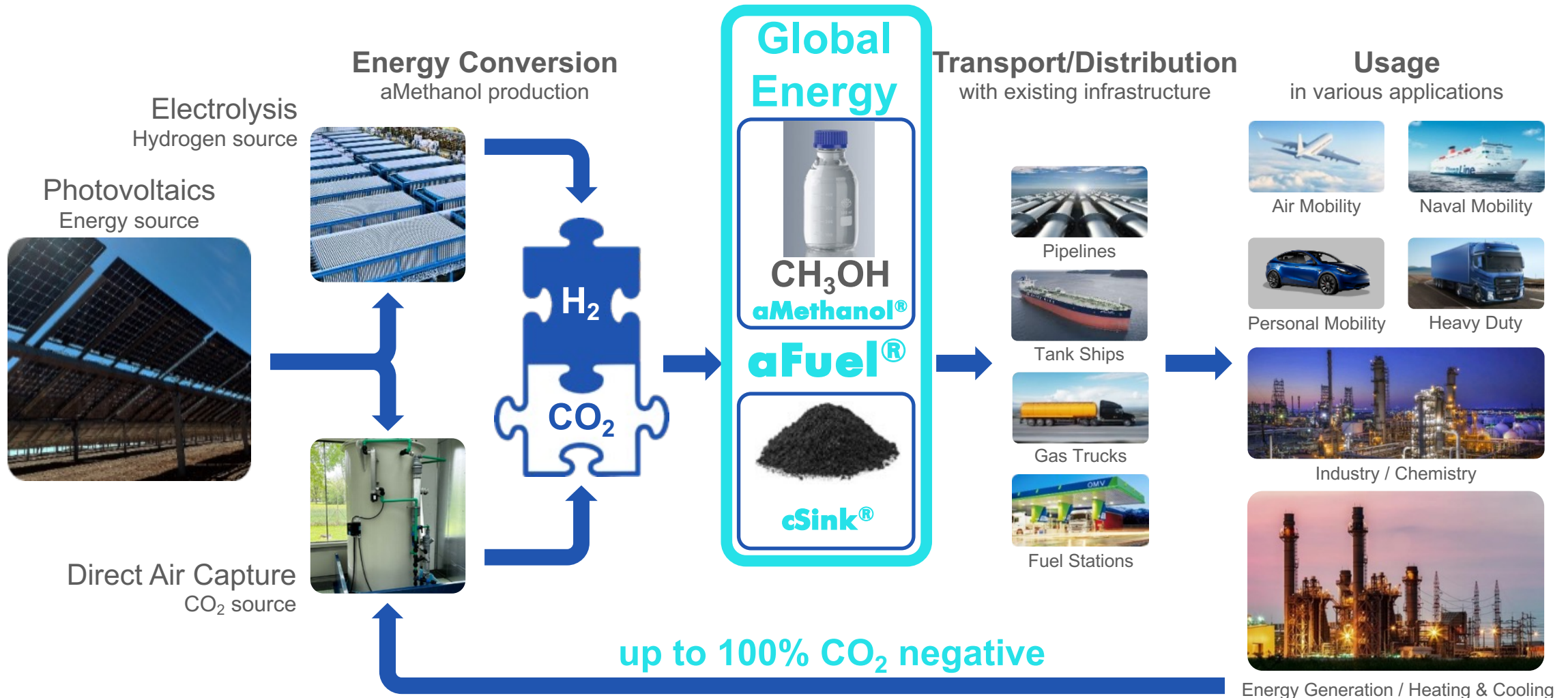
Cheapest Energy worldwide



Shuaibah, Saudi Arabia
600MWp
2400kWh/m² irradiance

0.88 ct/kWh
Lowest LCOE worldwide
(April 2021)

Renewable Global Energy, but Climate-Positive: **aFuel®**



Giga Plant

aFuel® World's first climate-positive Energy Carrier

PLANT SPECS

Plant Size: 120km²

Peak Power: 14.4 GW_p

(Modular Plant Design)

CAPEX: approx. 20b\$

Costs: approx. 1.5b \$/year

Sales: up to 20b \$/year

Net Income: up to 18.5b \$/year

Payback Period: up to 1.1 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

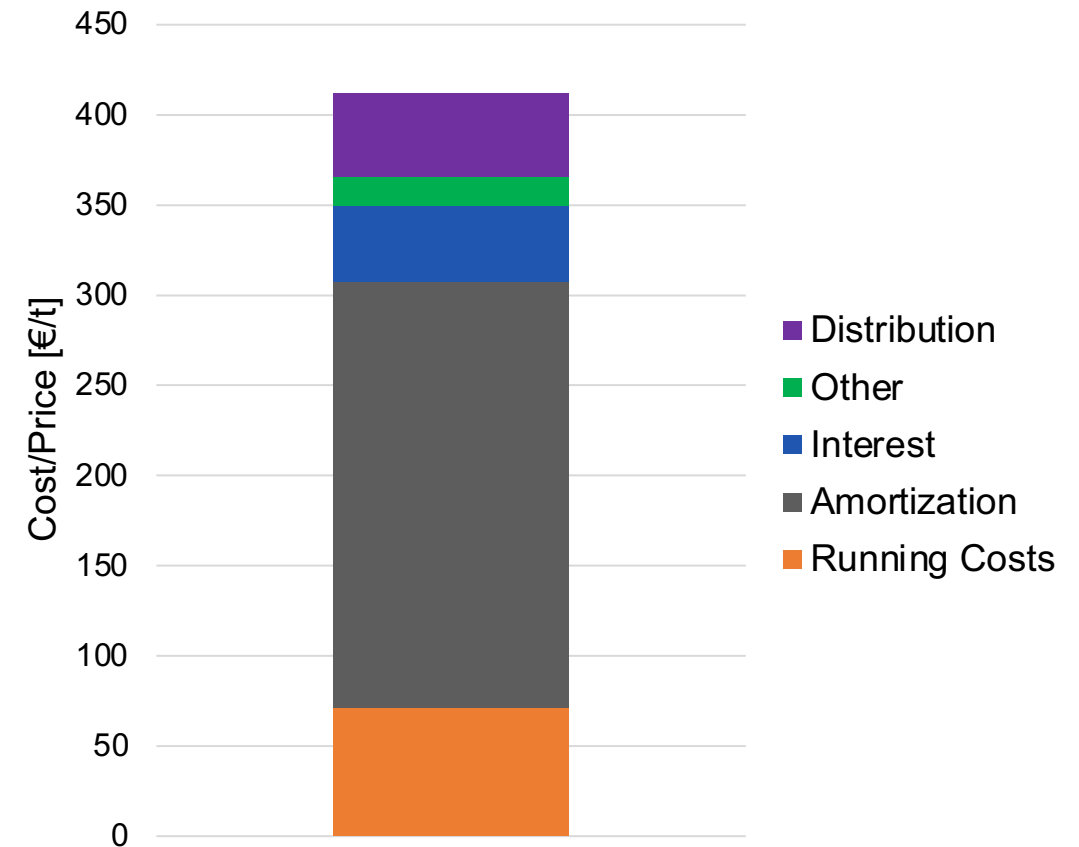
aFuel® Financial Calculation Cost per ton

▪ Running Costs:	71€
▪ Amortization:	236€
▪ Interest:	42€
▪ Other Costs:	16€
▪ Distribution:	46€

aFuel® production cost: **412€/t**

0.33€/liter or

0,05 €/kWh



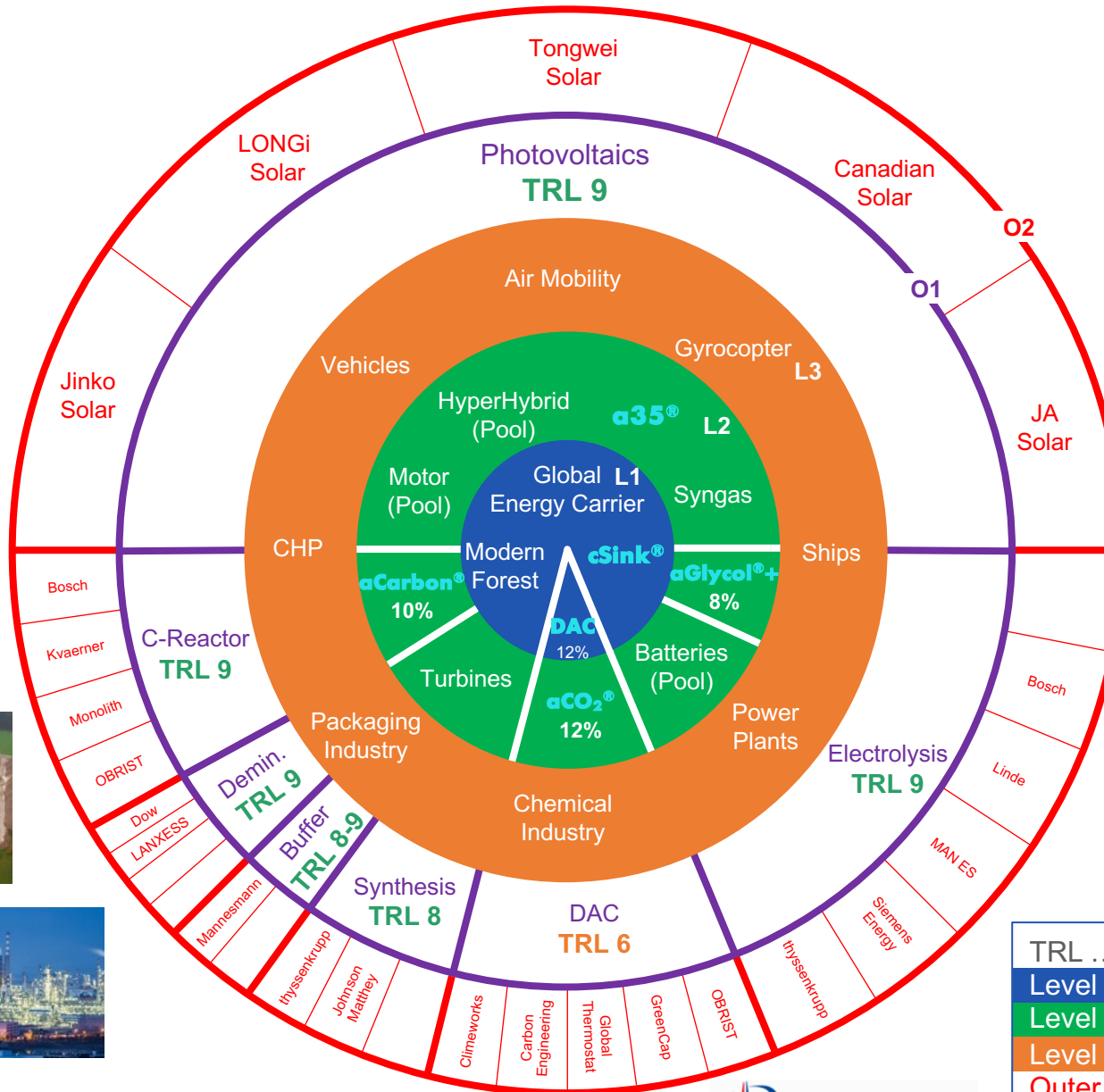
IP-Pool OP & OT

39 Patent Families
190 Single Patents

MONOLITH



JM Johnson Matthey
Inspiring science. enhancing life



Jinko Solar



thyssenkrupp



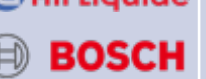
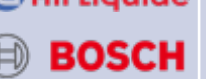
OBRIST
— TECHNOLOGIES —

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

Potential Licensees Companies/Industries

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



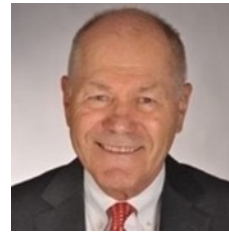
Area	Big Oil	Power Plants Electricity	Automotive	Trucks	Aviation	Shipping	Chemistry	Industry Leader	System Producer
Preferred Flagship Licensees	  	  	  	  	  	  	   	   	  
Potential Regular Licensees	    	   	   	  	  	   	  	  	

Experts, Network and Supporters

- Backed and supported by world-leading scientists



Prof. Schlögl



Dr. Jacob



Prof. Radermacher



Prof. Brasseur



Prof. Tillmetz



Prof. Olsowski

- Supported by United Nations and Governments



- Media: NZZ, FAZ, Welt, 3Sat, N24, ARD.....



Dr. Gerd Müller, UNIDO



Minister Karliczek, BMBF



Chancellor Kurt Nehammer

- Cooperation with world-leading Companies: Siemens Energy, thyssenkrupp, Geely, ...

Investor Options

- **Option #1: Capital Increase:**

- 1) Securing and extending patents
- 2) Demo plants
- 3) Marketing

- **Option #2: Joint Venture:**

- 1) Marketing & Sales JV
- 2) Production JV

- **Option #3: License Agreement:**

- 1) Standard License Agreement
- 2) Flagship License Agreement



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

CEO Frank Obrist
OBRIST DE GmbH

Felix-Wankel-Strasse 10
DE-88131 Lindau
GERMANY

+49 8382 88936 11
office@obrist.de
www.obrist.at

