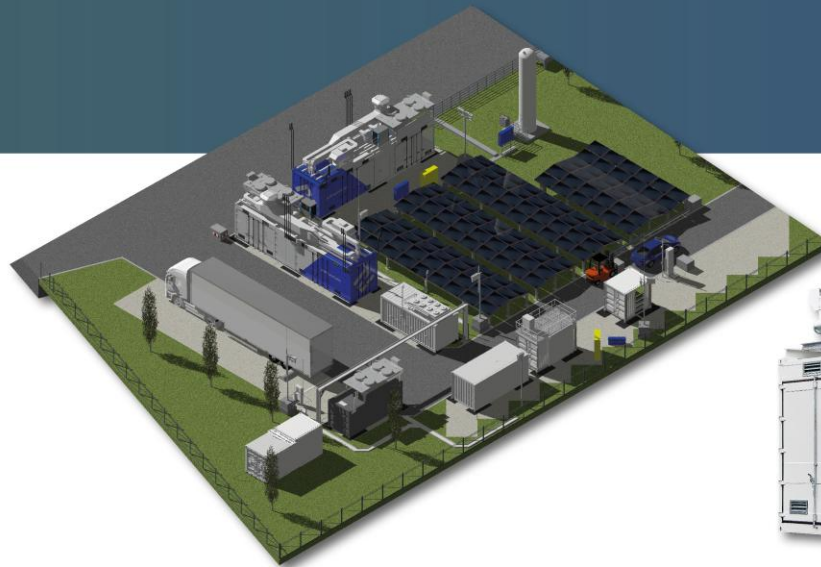
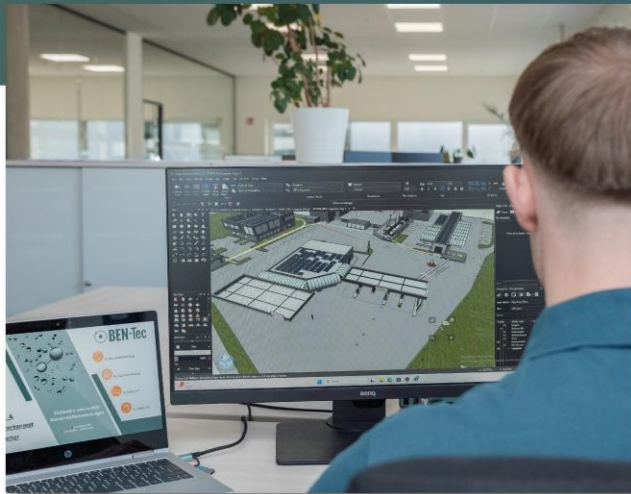




„Making renewable energy surplus efficiently usable.“



H₂PowerLyzer – PEM Electrolyzer

	H ₂ PowerLyzer 40	H ₂ PowerLyzer 120
Installed El. Power	48 kW	144 kW
Hydrogen Production	0,68 kg/h	0,68...2,04 kg/h
Load Range	20...100%	
H2 Output Pressure	≤ 40 bar	
Power Demand BoP	7 kW	21 kW
Voltage Supply	400 VAC / 50 Hz	
Controle Interface	Modbus TCP, Ethernet	



Product Scope:

- Power Electronics
- Electrolyzer
- System Controller
- Water & Cooling Unit

Optional Scope:

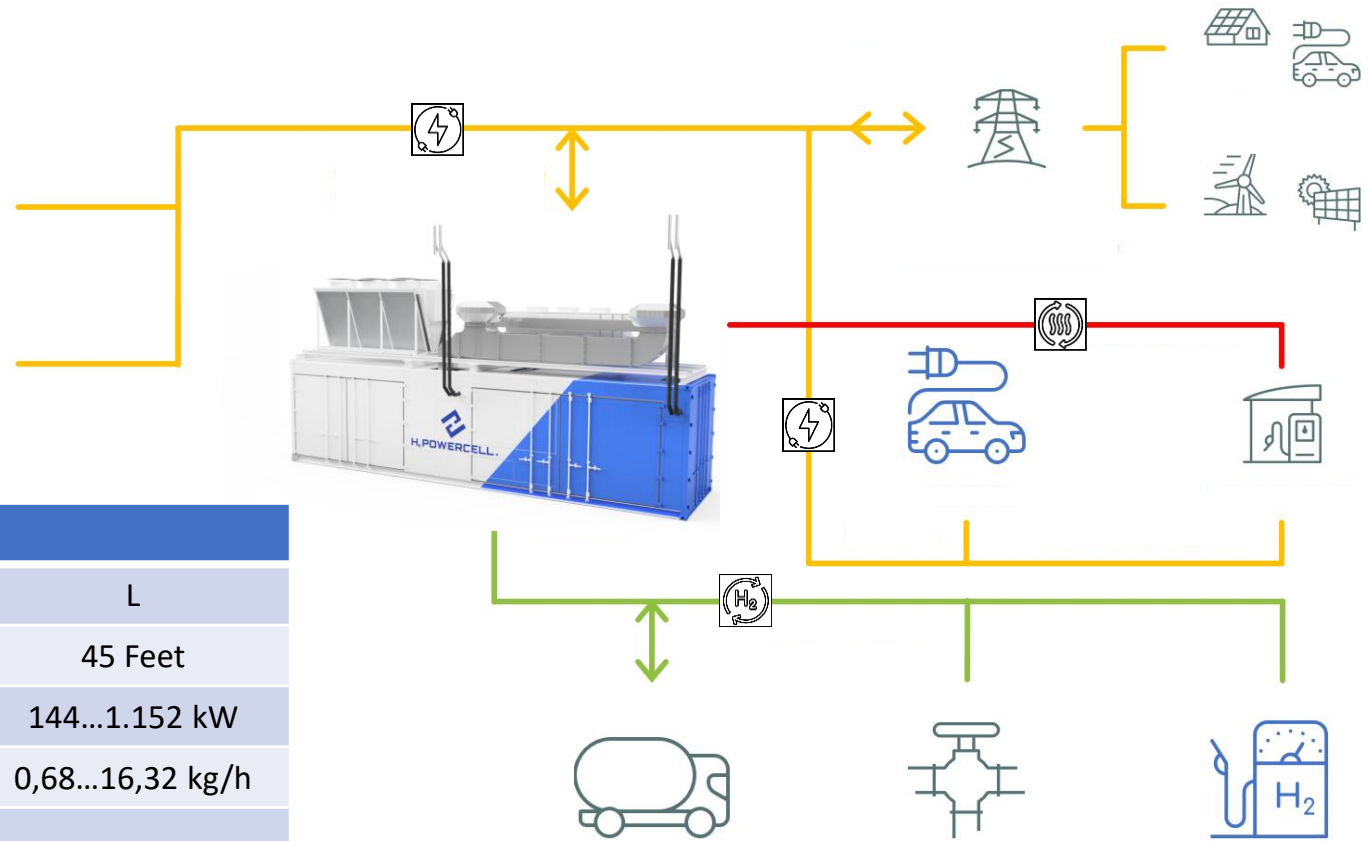
- Hydrogen Purification
- Water Purification
- Control Cabinet

H₂PowerCube

The Holistic Energy & Hybrid Storage Unit



H₂PowerCube – Energy & Power Hybrid System

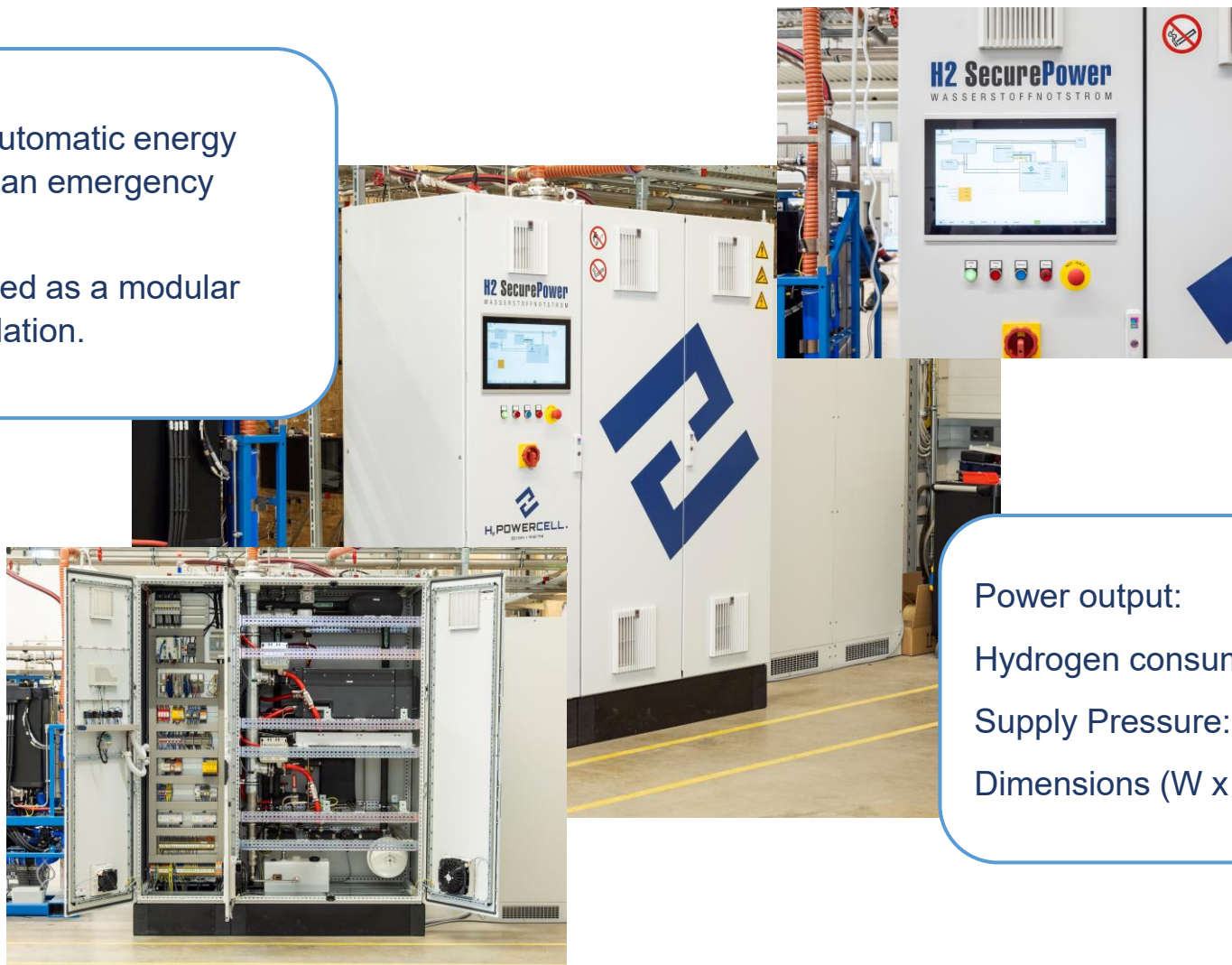


	H ₂ PowerCube		
Type	S	M	L
Container Size	10 Feet	20 Feet	45 Feet
Installed ELY Power	48 kW	48...144 kW	144...1.152 kW
Hydrogen Production	0,68 kg/h	0,68...2,04 kg/h	0,68...16,32 kg/h
H2 Output Pressure	≤ 40 bar		
Installed FC Power	up to 16 kW _{el}	up to 300 kW _{el}	
Battery Size	10 kWh / 10 kW	50 kWh / 200 kW	
Voltage In-/Output	400 VAC		

H₂SecurePower – Power Generator

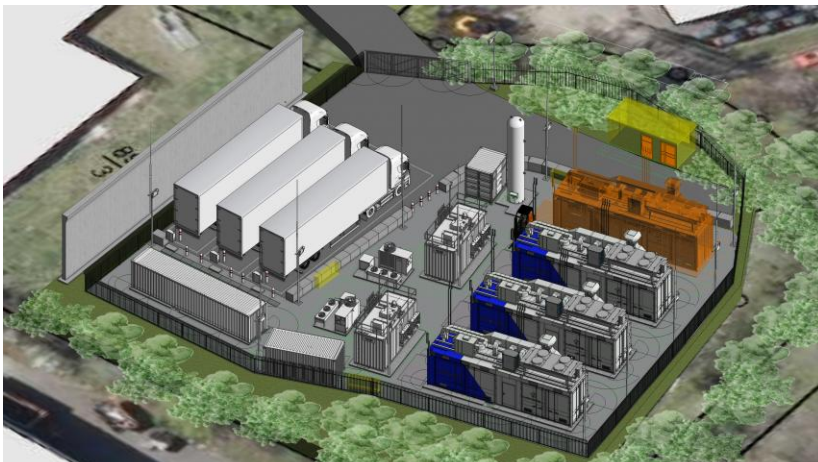
H2Securepower is an automatic energy generation system with an emergency power supply (EPS).

The system was designed as a modular cabinet for indoor installation.

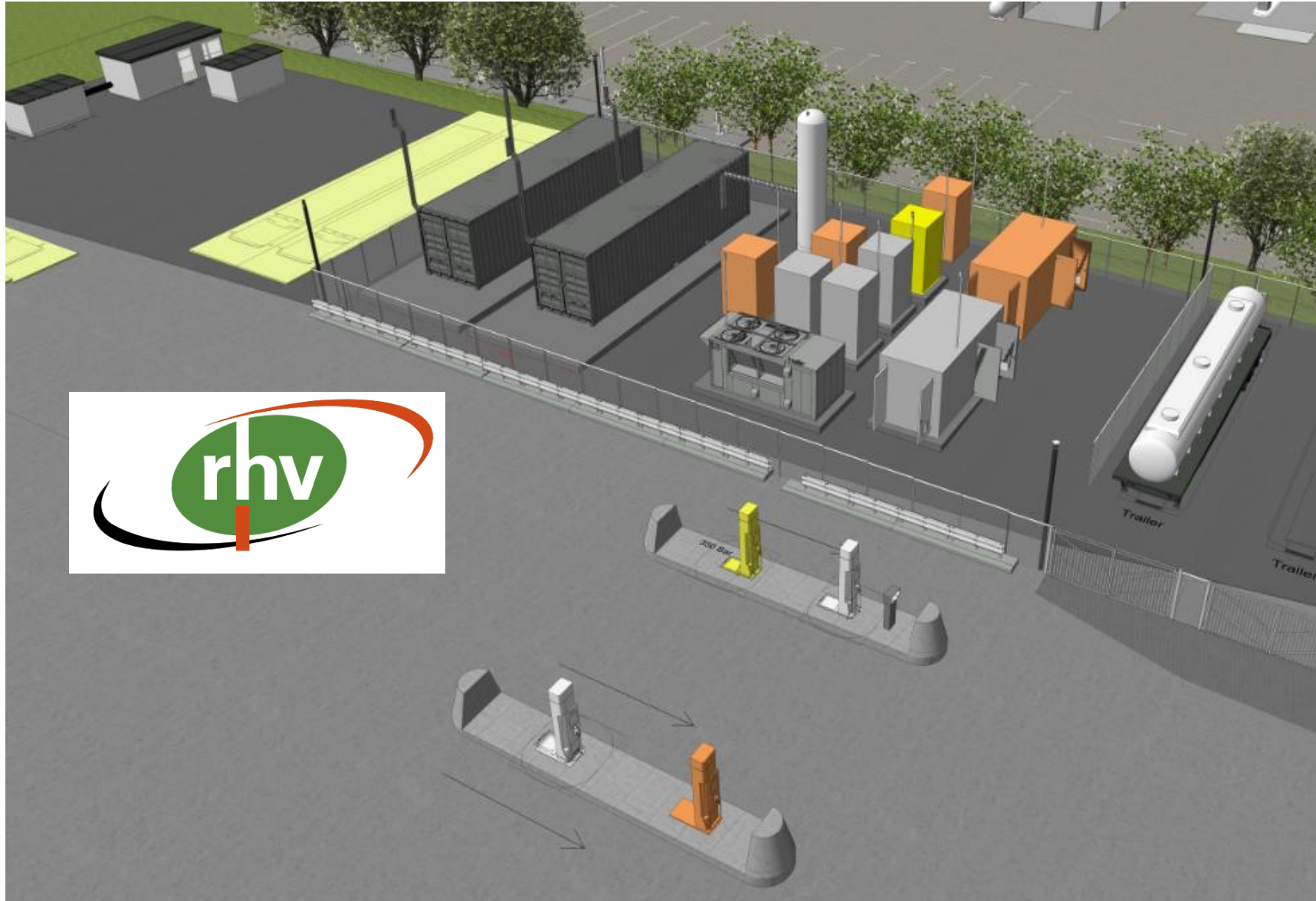


Power output:	up to 16 kW
Hydrogen consumption:	1,2 kg/h
Supply Pressure:	7 bar
Dimensions (W x L x H):	80 x 180 x 200 cm

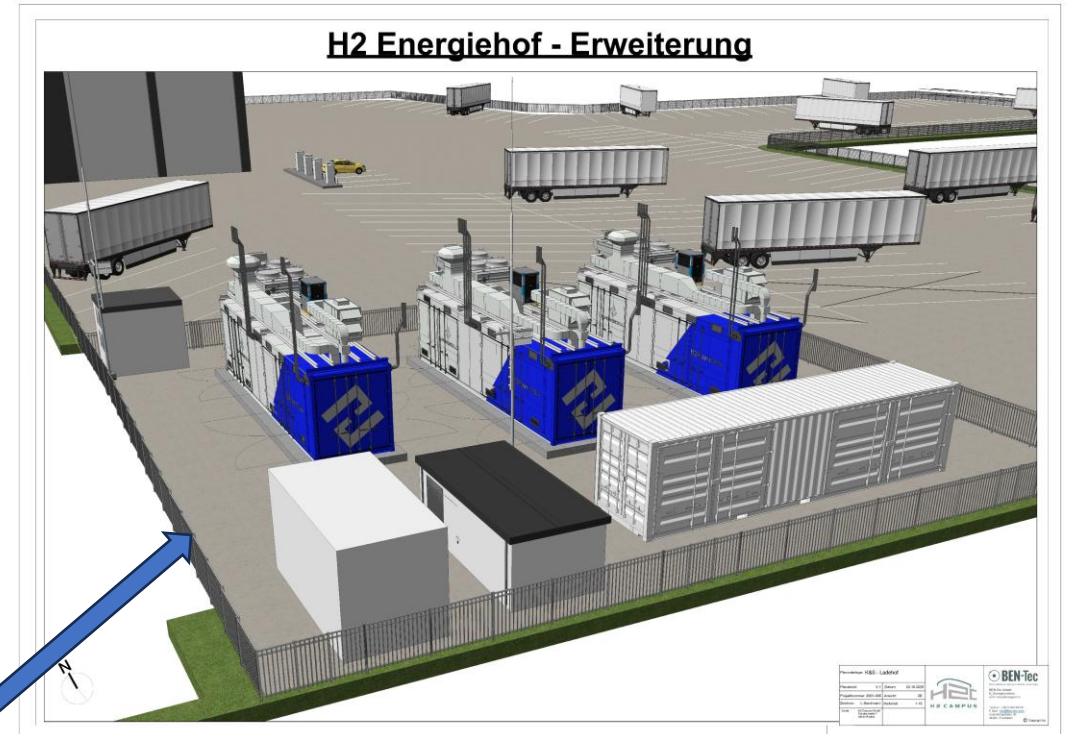
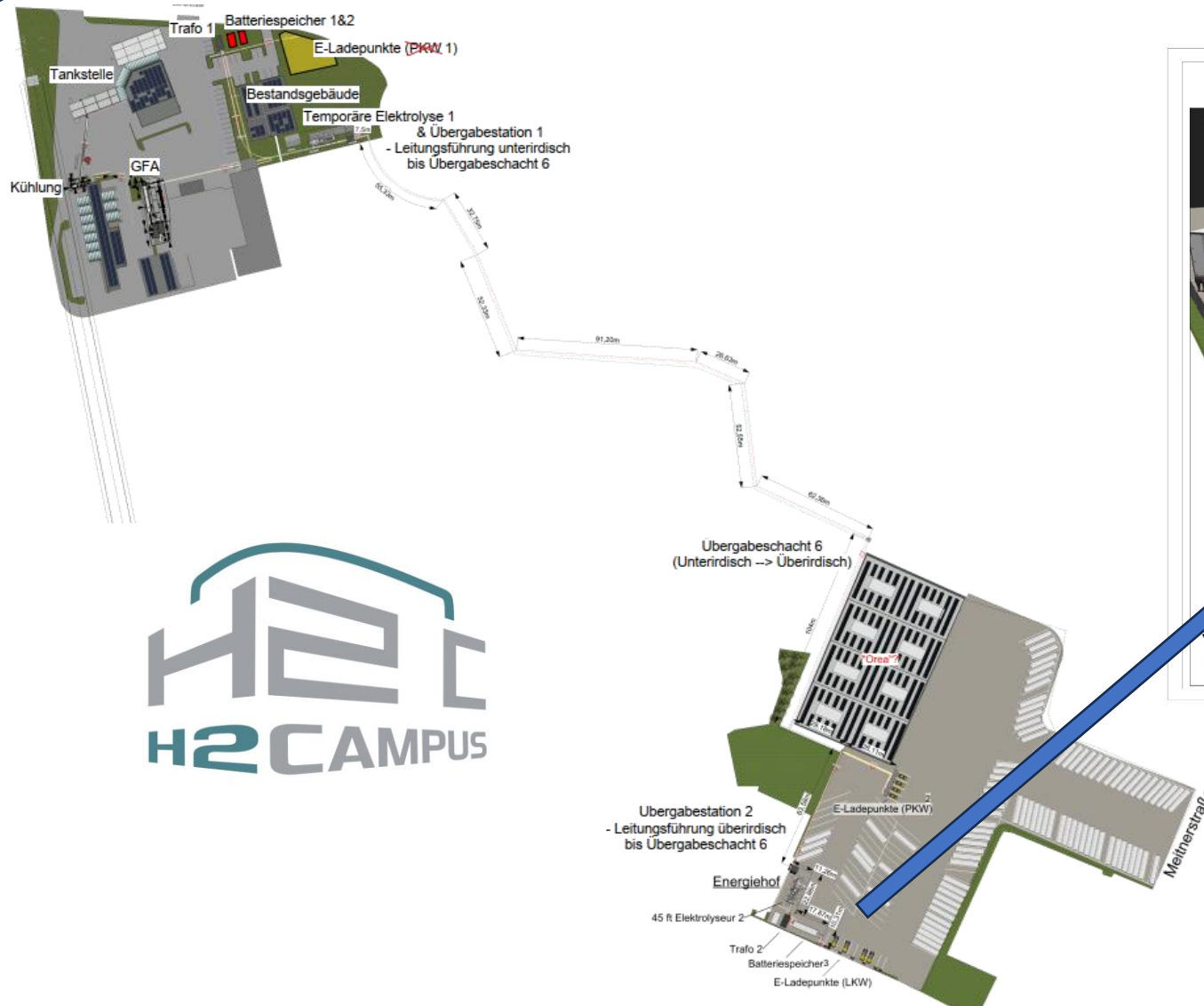
H₂PowerCube – H2 Refilling Stations



H2 Refilling Station - Eichenzell



H2 Refilling Station - Rheine



H2 Refilling Station - Schweitenkirchen



Hydrogen Hybrid Micro Grid



H2PowerCube S

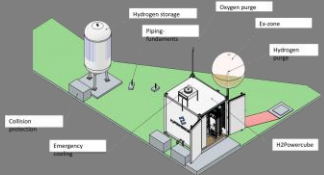
Technical Data

El. Power Connection	20 kW
Solar Power	30 kWp
H2 Storage Pressure	35 bar
Hydrogen Quality	5.0
El. Power Output	5 kW
Thermal Power Output	10 kW
H2 Storage Capacity	14 kg
Emergency Power	> 10 h
Container Size:	10 ft
Temperature Range	-15...45 °C

Customer placed new order for expansion

Hydrogen Hybrid Micro Grid Expansion

Existing Hybrid Energy & Power



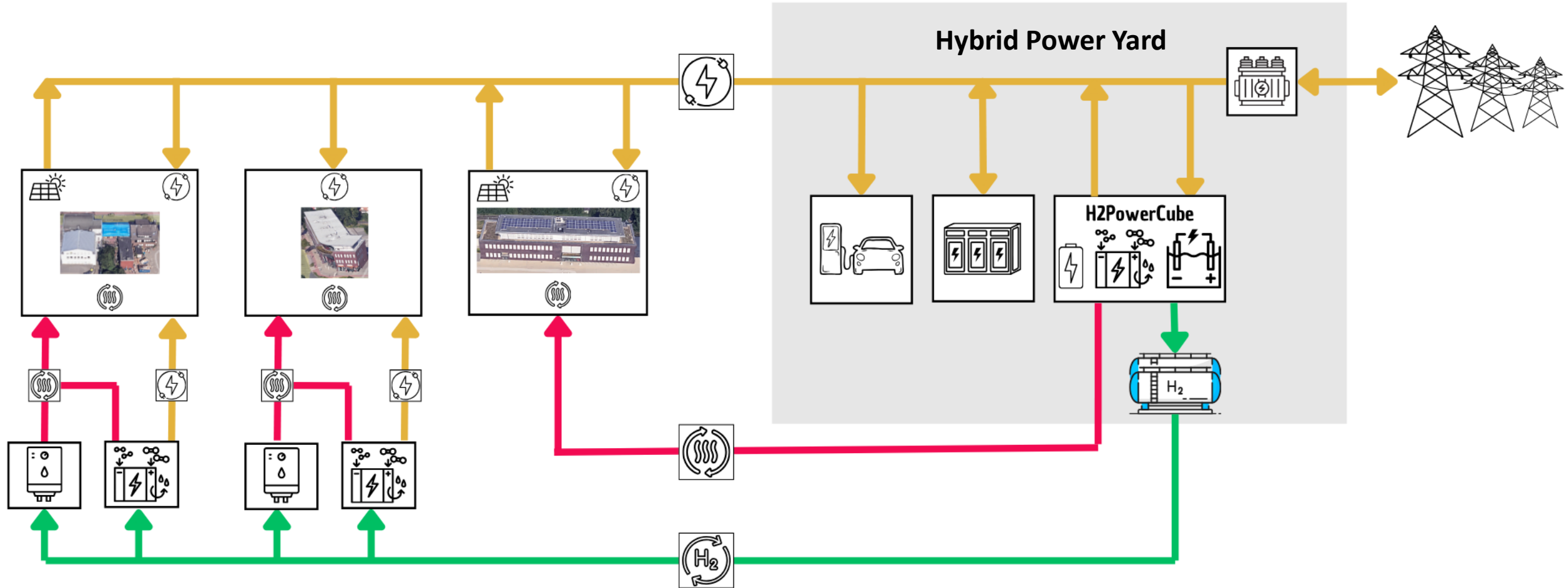
Hydrogen Storage (35 bar)	14 kg / 465 kWh
Battery	6 kWh
Elektrolyzer	16 kW
Fuel Cell	5 kW
Thermal Power	10 kW

Expanded Hybrid Energy & Power

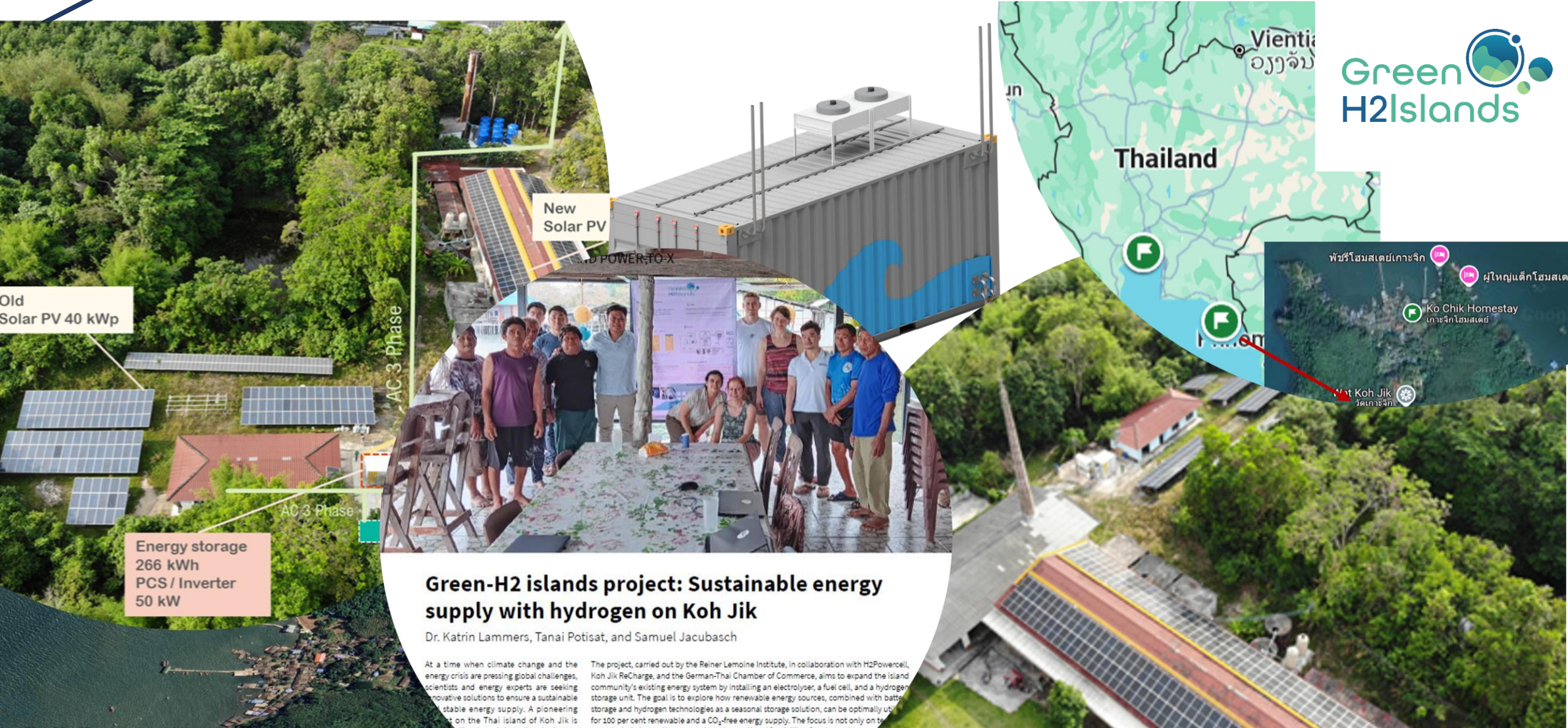


Hydrogen Storage @ 35 bar	16 kg / 530 kWh
Hydrogen Storage @ 480 bar	550 kg / 18.300 kWh
Battery	600 kWh
Elektrolyzer	240 kW
Fuel Cell	150 kW
Thermal Power	150 kW

H₂PowerCube – Hybrid Micro Grids



H₂PowerCube – Green H2Islands



Green-H2 islands project: Sustainable energy supply with hydrogen on Koh Jik

Dr. Katrin Lammers, Tanai Potisat, and Samuel Jacobasch

At a time when climate change and the energy crisis are pressing global challenges, scientists and energy experts are seeking innovative solutions to ensure a sustainable stable energy supply. A pioneering project on the Thai island of Koh Jik is

The project, carried out by the Reiner Lemoine Institute, in collaboration with H2Powercell, Koh Jik ReCharge, and the German-Thai Chamber of Commerce, aims to expand the island community's existing energy system by installing an electrolyser, a fuel cell, and a hydrogen storage unit. The goal is to explore how renewable energy sources, combined with battery storage and hydrogen technologies as a seasonal storage solution, can be optimally used for 100 per cent renewable and a CO₂-free energy supply. The focus is not only on the



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