

EFOY Hydrogen fuel cells

Power supply for a climate-neutral business park

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**SALES MANAGER
NETHERLANDS & BELGIUM**

SFC ENERGY AG

EFOY HYDROGEN FUEL CELLS

20 YEARS
SFC
ENERGY

Sales






85 million (2022)

354

Employees

5

Locations

Brunnthal (HQ) 
 Calgary 
 Almelo 
 Cluj 
 Gurgaon 

>60,000

Fuel cells sold
worldwide



ISO-certified for quality standards
and environmental guidelines

European Innovation Award
winner in 2021

100+

Global Sales and
Distribution
Partners



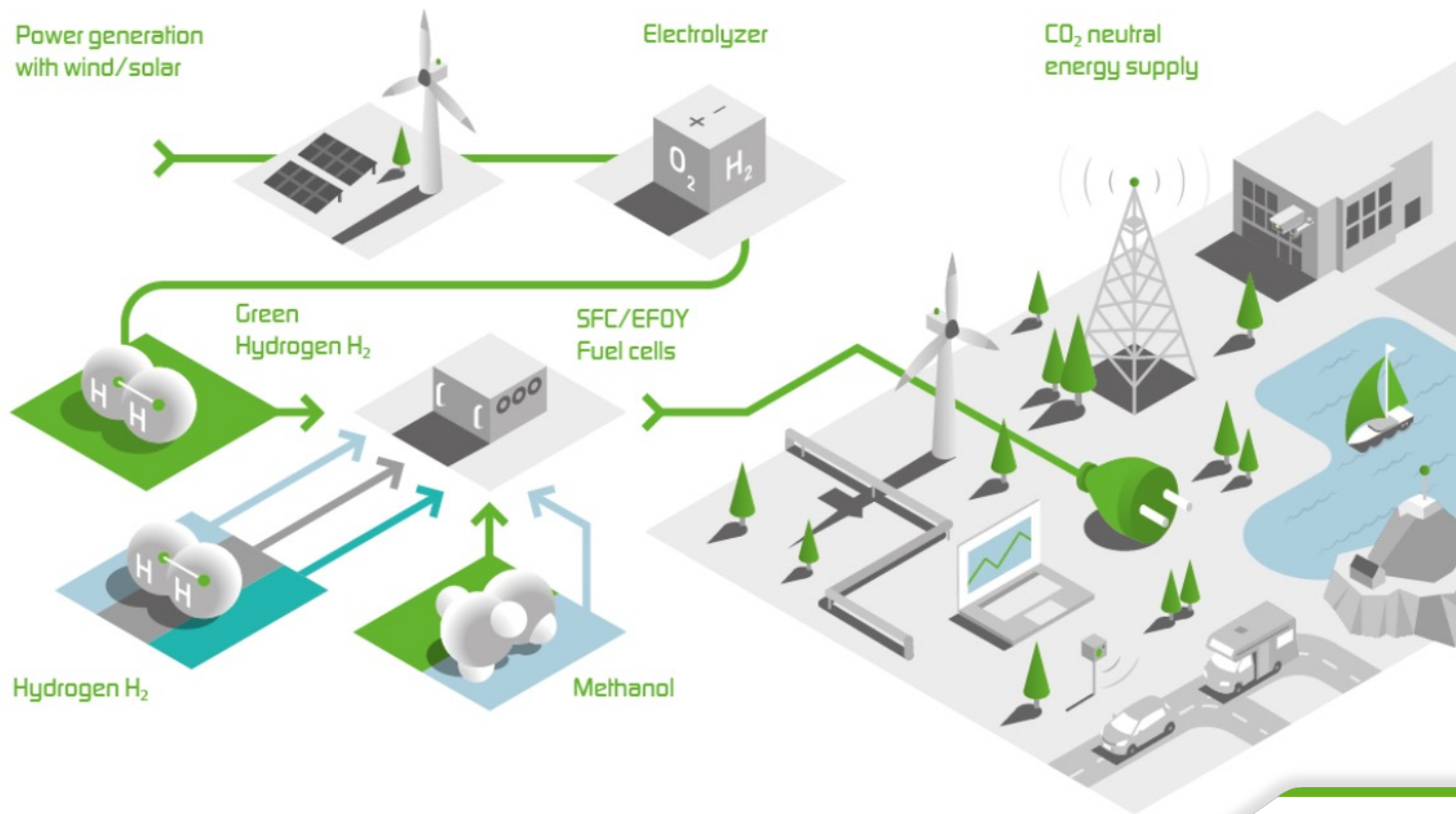
130 million

Operating hours

9.3 million kWh

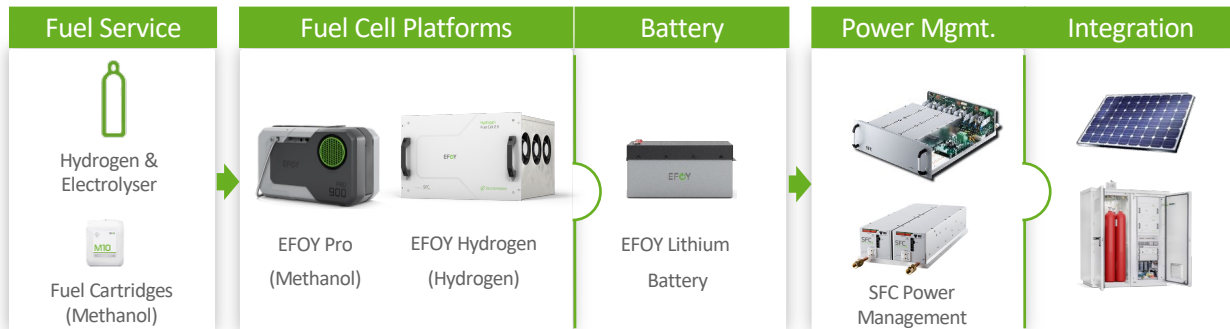
Environmentally friendly
energy

Hydrogen and Fuel Cells at SFC Energy



SFC is a leading supplier of fully integrated fuel cell & hydrogen power solutions with more than 60,000 sold fuel cells

SFC's Fuel Cell System Competence and Solution Offering



Power Outlet



Solar-Hybrid-systems / Stationary power supply systems



Uninterruptible power supply / Emergency power systems



Temporary power supply / Semi-stationary or mobile systems

Customer Service



Technical advice, repair and service packages



Remote maintenance, IoT and service solutions



We are offering a wide power range of fuel cells...

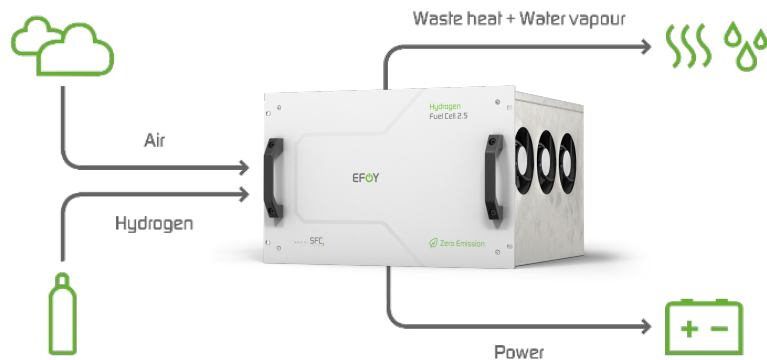
Portfolio of portable, mobile and stationary products up to 500 kW



EFOY Hydrogen Fuel Cells

Stationary power supply up to 500 kW

-  Environmentally friendly and quiet
-  Proven technology
-  Low maintenance & remote monitoring
-  Cluster for higher power demand



100 % Emission free

SFC Hydrogen Energy Solution

Stationary and mobile



X-Series

Outdoor



N-Series

Indoor



H₂Genset

Outdoor / Mobile

Market segments & applications

Sustainable energy supply for various use cases

Stationary applications



TETRA / Critical Comms



Telecommunication



Energy transmission



Datacenters



Gas infrastructure



Water infrastructure



Railway control centers



Health system

Market segments & applications

Sustainable energy supply for various use cases

Temporary applications



Mobile emergency power



Green film production



Event



Urban construction

Semi-stationary applications



Telecommunication



Off grid construction



Disaster recovery



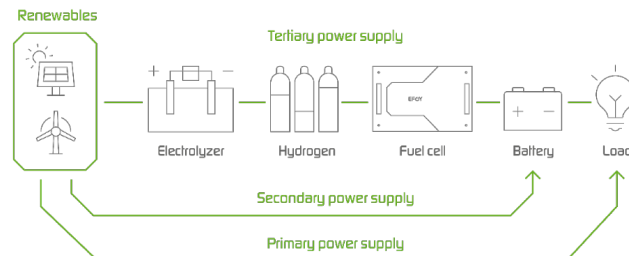
Festivals

SFC Energy AG

Power supply for a climate-neutral business park

Project description

- 🔌 Ensuring the energy supply of the self-sufficient and climate neutral SAN Group Headquarters
- 🔌 Primary powered by a 2 MW solar installation
- 🔌 Battery storage for short term energy supply
- 🔌 Hydrogen production during solar overcapacity
- 🔌 Hydrogen storage for back-up power, dynamic consumption and h2 fuel station for local bus and car fleet
- 🔌 EFOY Hydrogen fuel cell for power supply
- 🔌 CE+T solution for power conversion and back-up installation
- 🔌 Grid connection as final back-up

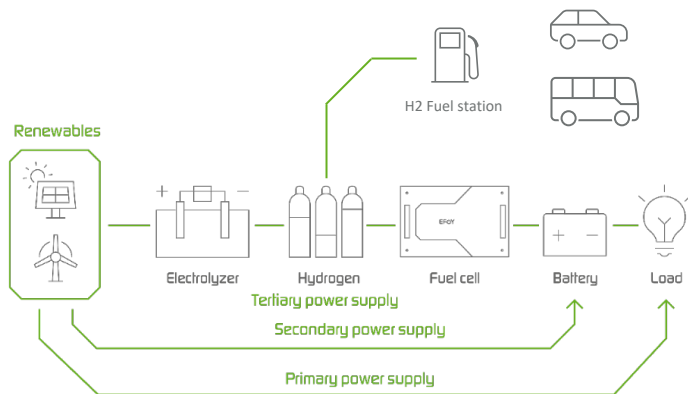


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Power supply for a climate-neutral business park

Hydrogen use

- 🔌 Hydrogen production for H2 fuel station for local bus and car fleet.
- 🔌 Zero emission and own fuel production on site



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Power supply for a climate-neutral business park

Challenges

- ⚡ Final load profile of business park and for back-up operation unknown until final installation done
- ⚡ System sizing based on customer assumptions
- ⚡ No documentation available
- ⚡ Availability of service and installation companies for hydrogen and electricity
- ⚡ Limited installation space
- ⚡ Safety and explosion concept
- ⚡ Commissioning within one year
- ⚡ Delivery times



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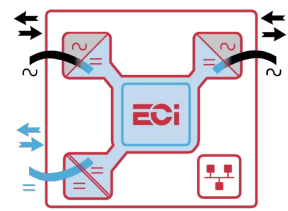
Power supply for a climate-neutral business park

Solution:



AC grid voltage
AC In: 230 V AC 3phase

Fuel cell voltage
DC In: 48 V DC



AC grid voltage
AC out: 230 V AC 3phase

Solution: EFOY H₂Cabinet N-Series

N2.5 / N5.0 / N7.5 / N10.0



Indoor Cabinet Solution for 2.5 kW to 10.0 kW output power per cabinet

Cabinets can be clustered for higher output power

Built-in 19" rack for the installation of all electrical components

Air conditioning: ventilation and heating

External hydrogen supply

Configuration according to customer demands

AC output power

UPS design

pressure reduction for various hydrogen pressures



Solution: CE+T Multidirectional Converter System

Multiconverter Sierra 72 kVA

Modular scalable 3p/400VAC 48VDC SIERRA system

Customized system sizing depending on the project needs

Input-/ output distribution

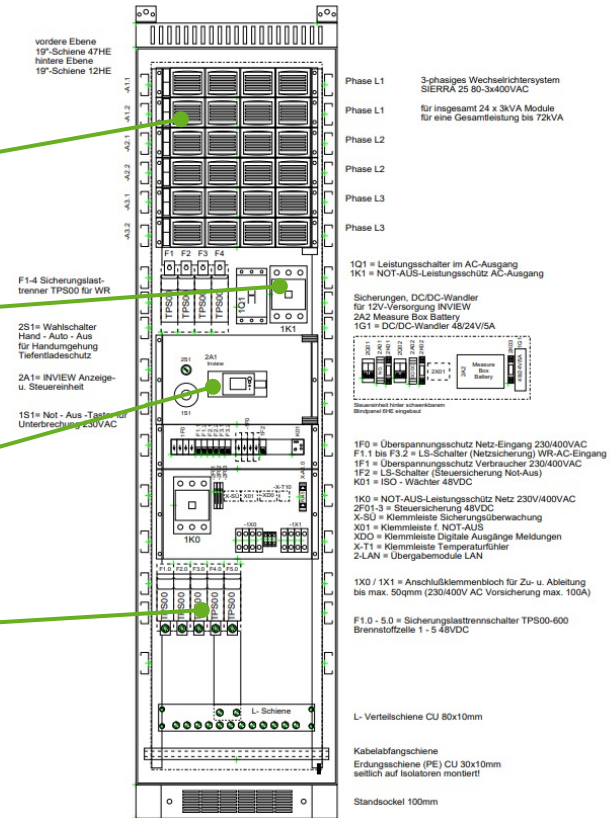
Overvoltage protection, fuses, MCB, EPO, bypass...

Inview System monitoring

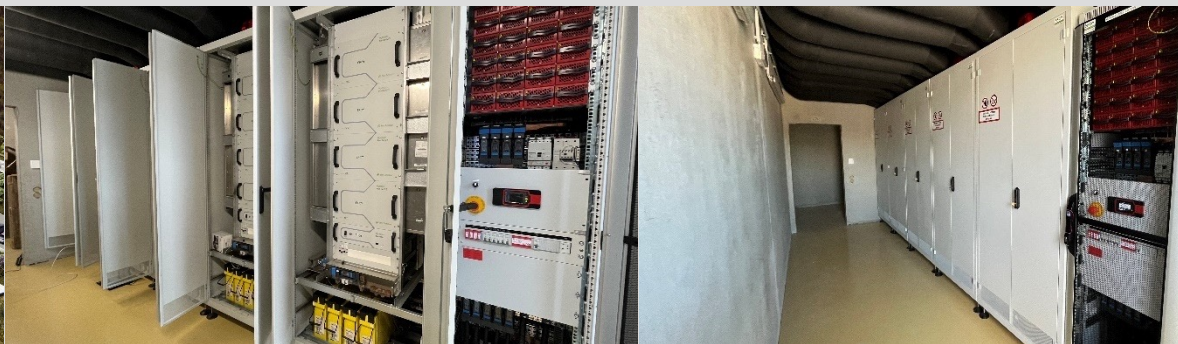
Control of powerflow, remote monitoring, system interface, alarm management

Fuel Cell/ Battery connection

Easy integration of different DC sources and sinks



Power supply for a climate-neutral business park



EFOY CUSTOMER

SAN Group



LOCATION

Fully autonomous SAN Biotech Park in Herzogenburg, Austria



CHALLENGE

Ensuring the energy supply of the self-sufficient and climate neutral SAN Group headquarters

SOLUTION

- 🔋 EFOY H₂Cabinets with 50 kW System power
- 🔋 EFOY H₂Cabinets are connected to hydrogen tanks
- 🔋 In the months with plenty of sunshine, 100 % energy self-sufficient thanks to solar- and hydrogen systems

« Our system focuses on the possibility to save and use solar energy 24 hours a day. The fully integrated energy concept with waste heat utilization and reverse power generation of the excess hydrogen will supply the entire SAN Group site in the future. The EFOY H₂Cabinet is the ideal secondary power supply for our fully autonomous energy concept and provides fully automatic access to our saved hydrogen in the event of a power outage. »

Martin Blauensteiner, Managing Director SAN Venture and Project Manager

BENEFITS

- 🔋 Energy self-sufficient
- 🔋 Zero Emissions
- 🔋 Reliable back-up power

SFC Energy

Fuel Cell Market Traction

More than 60,000 fuel cells in the market



Selected Customers



Selected Sales & Service Partners



Thank you
for your attention

Check our website

www.cet-power.com

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