

SAFE & INDEPENDENT ENERGY

100% RECYCLABLE

Hy2green



**THE SAFEST
STORAGE SYSTEM
FOR RENEWABLE
ENERGY!**

WITH THE Hy2green SOLID
MATERIAL STORAGE TANKS
FOR HYDROGEN

 GKN POWDER METALLURGY





Generate energy locally
and store without loss

Hy2green storage is the ideal solution to store locally-generated energy for a long time without any loss and to access the available resources when needed.



Store in summer, use
in winter. Particularly
long energy storage

Hydrogen can be stored for a particularly long time in metal hydride. The storage system ensures energy security and enables the building to have a self-sufficient energy supply.



Use heat and
electricity sustainably,
emission-free

The Hy2green system provides electricity and heat. This increases the overall energy efficiency of the system without any harmful emissions.



The safest way to
store hydrogen in a
compact manner

The metal powder-based Hy2green storage system is significantly safer and smaller than other hydrogen energy storage systems.

Unbeatably small and safe!

A comparison of tank sizes
and aggregate states –
to store 1 kg hydrogen:

Conventional hydrogen storage tanks are large or under high pressure. This is a safety risk. You are on the safe side with Hy2green storage tanks.



METAL HYDRIDE -TANK
17 l / 40 BAR / 20 °C

HIGH-PRESSURE GAS TANK
17 L / 1.000 BAR / 20 °C

CONVENTIONAL GAS TANK
310 L / 40 BAR / 20 °C

USING GREEN ENERGY SUSTAINABLY AND SAFELY

Energy savings and local energy production from natural energy sources such as the sun, wind or water are at the center of reducing CO2 in the building sector. However, the generation of sustainable energy does not always meet the actual demand – the sun, wind and water are often not available in sufficient quantities and continue to make it necessary for the end consumer to purchase expensive electricity from the grid.

SELF-SUFFICIENT ENERGY WITH NEW STORAGE TECHNOLOGY

The Hy2green storage system enables compact, safe storage of energy, even over longer periods of time. Locally generated “green” energy can be accessed even when the sun is not shining, the wind is not blowing or the waterways are frozen over in winter. The Hy2green storage system uses hydrogen and metal powder: Hydrogen is the storage medium for the originally electrical energy and metal powder is a safe and recyclable storage medium for hydrogen.

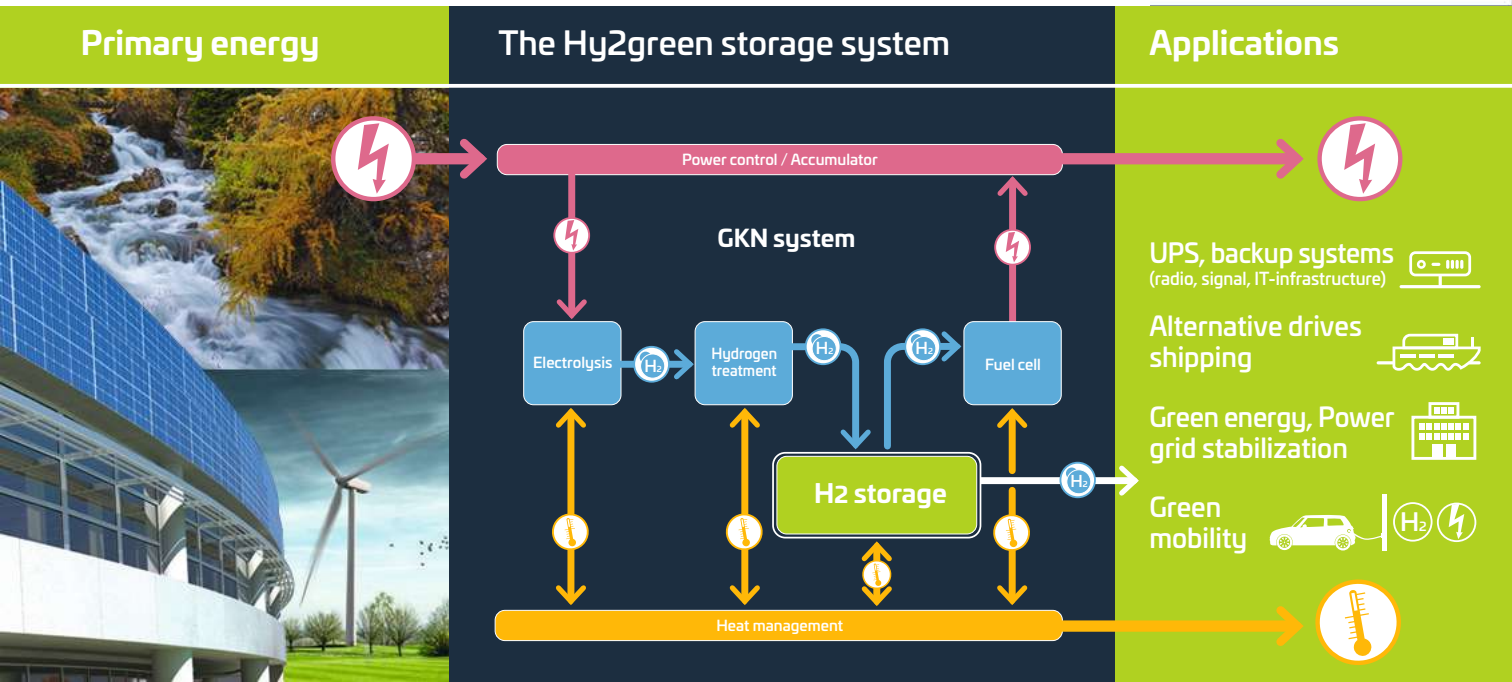
HOW THE HY2GREEN STORAGE SYSTEM WORKS

Hydrogen is generated from electrical energy by means of electrolysis and fed into storage tanks filled with metal powder. Here, the hydrogen binds to the metal particles – what is known as metal hydride is formed as a safe and stable compound. This compound can be released again by simply adjusting the pressure and temperature. The hydrogen is fed into a fuel cell and converted back into electricity. All that remains is oxygen and water – without any environmentally harmful influences.

The integrated heat management system captures the conversion energy that is lost as heat and makes it available to the application’s heat cycle. This significantly increases the energy efficiency of the entire system.

The result:

An efficient zero-emission electrical and thermal power systems.



BUILDING PROJECT

KNAPPENHAUS SOUTH TYROL



Our “Knappenhäuser” building project was completed in spring 2019 and has been in operation ever since.

Our goal: further development of the compact, modular and economical system for medium to large residential complexes.

We will be happy to keep you up-to-date regarding new, future-forward storage technology. Subscribe to our newsletter at www.hy2green.com or contact us if you are thinking about a self-sufficient energy supply system for your property.



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