

## ENERGY TURNAROUND: CLIMATE-NEUTRAL ENERGY SUPPLY, PHASING OUT OF FOSSIL FUELS AND NUCLEAR POWER

# HYDROGEN ENERGY WITHOUT CO2

#### Why?

The search for alternative energy sources and the move away from fossil fuels of the Federal Republic of Germany and the European Union to reduce CO<sub>2</sub> emissions signifikant, inevitable.

The goals have been set: Germany wants to be greenhouse gas neutral in terms of energy by 2050.

At WOLF Power Systems, we think, act and futureoriented in order to be able to meet the demand for environmentally friendly and resource-saving energy supply in the long term and to recognize technological trends at an early stage.

#### How?

An important element in achieving this goal is the focus here is on the efficient, safe and economical use of hydrogen as an energy carrier. In order to realize these ambitious visions, it is necessary to establish and expand a nationwide, high-performance  $H_2$  infrastructure.

The conversion of electricity from renewable energies to hydrogen by means of electrolysis plays a central role in this.

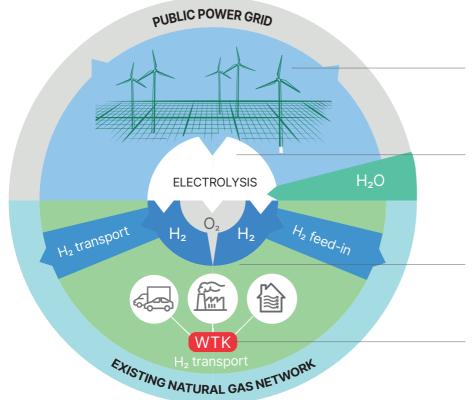
 $H_2$  is transported via a separate infrastructure, for whose development the existing gas infrastructure is used.

Green  $H_2$  can be used as a  $CO_2$ -free feedstock, fuel, and energy source in all major sectors of industry, transportation, and heating. In dark periods,  $H_2$  can be used for reverse power generation, e.g. with hydrogen CHPs or fuel cells. These technologies are known as power-to-gas or power-to-X technologies.

An absolutely climate-neutral energy cycle.

The establishment of hydrogen supply networks and corresponding storage facilities will create important building blocks for a secure energy supply.

### Hydrogen as a flexible and climate-neutral energy carrier



Wind farms and solar fields generate CO<sub>2</sub>-free electricity. This is fed into the for electrolysis.

In these plants, water and electricity are the energy carrier H<sub>2</sub> from water and electricity and fed into a special supply network.

The network development plan for the enable a Field-wide, climateneutral energy supply.

The GTK CHP unit uses this green and absolutely climate-neutral electricity and heat. With high efficiency and under "zero impact" conditions.

## WTK 50 H<sub>2</sub>GO HO8 BLOCK HEATING POWER PLANT

#### With what?

The Wolf Power Systems WTK 50 H₂GO H08 is designed for operation with pure hydrogen. In case of need the power plant can also be operated in transitional mode using natural gas or a natural gas mixture.

### Buy now, be well prepared and later retrofit

Flexibility through natural gas conversion: This enables optional operation with natural gas and biogas is possible.

This provides investors with a high degree of planning and future security.

Let us take the first step together go.

## Hydrogen CHPs at a glance Features and key data of our

- Climate-neutral and demand-oriented generation of Electricity & heat through cogeneration
- Flexibility through switching technology from natural gas and biogas to hydrogen
- High EGR rate (exhaust gas recirculation) and lean operation with lambda 2.5-3
- Particularly cold combustion to reduce Nitrogen oxides (NOx) below detection limit
- Optional: Digital integration of the power plant into the power plant cloud for grid stabilization.
- Cost guarantee





You have questions and want more information? Let us talk! We would be happy to make you an individual offer for your future-oriented, climate-neutral energy supply.

#### **WOLF POWER SYSTEMS GMBH**

#### **WOLFHAGEN**

Unterm Dorfe 8 D-34466 Wolfhagen

Phone: +49 (0) 5692 9880-0 E-Mail: info@wolf-ps.de

Website: www.wolf-ps.de/en-de

#### **GORLEBEN**

Streßelfeld 1 D-29475 Gorleben

Phone: +49 (0) 5882 9872-0 E-Mail: info@wolf-ps.de

Website: www.wolf-ps.de/en-de

