# THE POWER OF HYDROGEN







#### The Power of Hydrogen

We at H2 Energie recognized early on that the future of energy generation will not lie with fossil fuels. That's why we started research and development 10 years ago.

Our unique system is able to generate green hydrogen in a completely self-sufficient and decentralized manner. The modular container design achieves an enormously high level of efficiency.

You benefit from our concept and help to conserve the resources of our earth. With an investment in the renewable energy market, you secure financial resources advantages and make a valuable contribution to the ecological balance.

With H2 green energy, we are relying on a promising and profitable alternative to conventional energy production.

### INVESTMENT

Example of an investment in a hydrogen plant in which renewable energies can be generated.

**What will be produced by the machine?** Electricity / steam heat / CO<sub>2</sub> certificates (emissions trading)

**Investment place** Worldwide

**Dimension of our hydrogen plant** 1,0 MW electrical power

Investment costs 2.000.000 €

**Term of Investment** 6 Months

**Plant capacity** 98%

**Required employees** 2

Warranty 10 Years





Technical functionality of our hydrogen plants.



After the plant has been started by an external energy supply, there is no further operation need for additional energy supply from the outside.

The hydrogen generated by the water electrolysis is used directly without intermediate storage.

The hydrogen can be combined with the natural gas in the gas network be mixed in.

In internal combustion engines, hydrogen can diluted form. In addition, no additional fuel is required.

In existing generator systems, diluted hydrogen can be used to generate electricity instead of fossil fuels.



#### Advantages compared to photovoltaic systems

	H2 Grün Energie	PV Germany	PV Turkey
Installed power	1000 KW	1000 KW	1000KW
Space requirement for installation	100 m <sup>2</sup>	10.000 m <sup>2</sup>	10.000 m <sup>2</sup>
Annual production hours	8000h	900h	2000h
Investment costs	2.000.000€	1.000.000€	1.000.000€
Electrical energy produced per year	8.000.000 kWh	900.000 kWh	2.000.000 kWh
CO <sub>2</sub> savings in a year in tons	4560t	513t	1140t
Raw material requirement	Water	none	none
Further income opportunities	Steam heat	none	none





Development of the electricity prices for german end customers in Eurocent/KWh

#### Price development of EU emission certificates in Euro per ton CO<sub>2</sub>



## **DETAILS ABOUT OUR PLANT**

Nominal power 1 MW

**H**<sub>2</sub>**prodction** 100%

nominal system efficiency 98%

Lastwechsel 30 Sek. (Minimallast bei Nominallast)

**H**<sub>2</sub> **delivery pressure** 10 - 30 Bar

**O**<sub>2</sub> **delivery pressure** pressureless

**Required types of Water** seawater / groundwater

**nominal consumption of water** 625 l/h (bei 10°dH)

**Grid connection electrolysis** 3 x 400 V Y, 3 x 400 V /50 Hz

**Total weight** ca. 39t (operable)

Ambient temperature -20° degree to +40° degree

**Dimensions LxBxH** 40' Container, incl. attachments and mountings approx. 12,03 x 2.34 x 2,69 m



## **OUR SERVICES**

Investing in a hydrogen plant is one investment in the future.

Simply benefit from this efficient and environmentally friendly form of energy generation

Your decisive advantages in a summary.

- There are **one-off** investment costs.
- The investment costs are 2.000 € per installed KW.
- The energy system comes with a **10-year guarantee**.
- Based on **10 years** of use, the production costs are **0,02 € / kWh**.
- Based on **20 years** of use, the production costs are **0,01 € / kWh**.
- Within the first **10 years**, the maintenance will be carried out by H2 Grün Energie **without any fees** being incurred.
- After **10 years**, there are **no** major operating and maintenance **costs**.
- In general, generators that are **regularly** and **properly** maintained have a **long service life.**

#### Your benefits by investing in a hydrogen plant

Direct benefits Generating renewable energies **Indirect benefits** Healthy and quality life

## Your advisor and intermediary in matters of renewable energies:

Publisher

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