



H2 Powercell GmbH

Company Overview

H2 Powercell GmbH is a technology startup based in Emsdetten, Nordrhein-Westfalen, Germany. The company was founded in February 2020 to turn innovative hydrogen and fuel cell ideas into practical solutions for private, commercial, and industrial users. It develops, integrates, and delivers systems that generate both electricity and heat using fuel cell technology, helping clients move toward more sustainable and resilient energy supply.

The vision of H2 Powercell is to contribute to a climate-neutral future by making hydrogen technology more broadly accessible. The company combines expertise in hydrogen systems, fuel cells, electrical engineering, and system design.

Products & Solutions

H2 Powercell offers a range of products and services designed to meet demands for clean, reliable power and heat, especially where both are needed.

Product	Function / Use Case
H2 PowerPEM 5.0	Fuel cell system that provides both electricity and heat. Ideal for multi-family homes, schools, offices, hotels, remote sites, or any building needing reliable and efficient combined energy supply.
H2 PowerCube	Modular hydrogen-based system integrating electrolyzer, fuel cell, and battery. Application fields include hydrogen refuelling stations, grid stabilisation, emergency backup, industrial usage, decentralised energy systems. Scalable for both small- and large-scale deployments (from tens of kW to hundreds of kW) depending on configuration.
H2 SecurePower	Fuel cell-based backup power system for critical infrastructure. Fully automatic, water-cooled, designed for high reliability.

Product

Function / Use Case

SmartMonitorSystem Monitoring and energy management tools to give users visibility into consumption, performance, and optimisation of the hydrogen / fuel cell systems.

Key Strengths

- Early mover in hydrogen fuel cell CHP (combined heat & power) solutions, especially for smaller-scale, buildings, commercial, critical infrastructure applications.
- High modularity and flexibility in product design (e.g. H2 PowerCube modular units) which allows both customised and scalable solutions.
- Strong integration of cross-disciplinary expertise: hydrogen system design, electrical engineering, energy system monitoring.
- Focus on user experience and total system visibility (monitoring, smart control) enabling clients to optimise performance and efficiency.
- Support for funding and regulatory compliance: provides tools and services to help clients access subsidies, prepare technical documentation, manage approvals.

Markets & Applications

H2 Powercell's systems are suited for a variety of sectors:

- Residential and multi-family housing
- Schools, office buildings, hotels, and public buildings
- Remote or off-grid sites and events where reliable power and heat are required
- Critical infrastructure needing backup power with high reliability (e.g. data centres, medical facilities)
- Energy transition projects: hydrogen refuelling, grid flexibility, local energy storage, and clean micro-CHP systems

Experience & Track Record

- Founded in 2020, with roots in earlier expertise in electrical engineering, emergency power, hydrogen technology.
- Early deployments: installation of first fuel cell in Hopsten (school) shortly after founding; fuel cells in multi-family homes.
- Active projects under funding programmes (e.g. "Sorglos BHKW" project under NIP II for hydrogen technologies).