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Siqens' EHS Technology: A Breakthrough in Hydrogen Recycling

Siqens GmbH has developed the electrochemical hydrogen separation (EHS) technology, which enables efficient, cost-effective extraction of high-purity hydrogen from gas streams like natural gas, biogas, and industrial exhaust. Consuming only 3–5 kWh per kilogram of hydrogen—about 10% of the energy needed for electrolysis—EHS supports decentralized hydrogen production via existing gas networks.

Key Benefits:

Hydrogen Recycling: Converts waste gases into valuable hydrogen, reducing costs and emissions.

Industrial Applications: Used in semiconductor, glass, steel, metal, and food industries for on-site hydrogen supply.

Mobility Support: Enables decentralized hydrogen production for fueling stations, boosting clean transport infrastructure.

Proven Use Case: Successfully implemented in Haßfurt, where hydrogen from the gas grid powers fuel cells for electricity.

EHS positions hydrogen as a practical, scalable solution for cleaner energy and industrial efficiency.