

Power-to-Gas Technologie

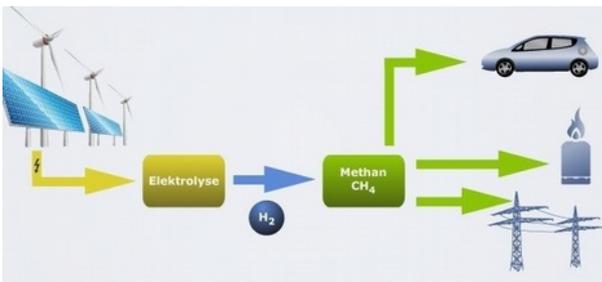
With the **Power-To-Gas** storage technology it is possible to buffer regeneratively produced waste power from wind or solar plants as chemical energy in the form of hydrogen or synthetic natural gas – just like a giant accumulator. In conjunction with the future extension of regenerative power production it will become more important to recall waste power in case of need.

The advantages of chemical storage of power in the form of hydrogen or methane (natural gas) - made by the use of carbon dioxide from hydrogen - are high energy densities, quick availability and multiple usages for mobility, power economy and industry. Hydrogen for example will be needed as an energy source for fuel cells that will also make important contributions for effective power supply and individual mobility in the future.



For IPS-FEST the hydrogen electrolysis is a key technology

The idea is impressive: converting waste power via electrolysis to hydrogen and buffering the hydrogen in existing gas distribution systems and then recalling it at any time when needed (e.g. H₂- fuel cell, hydrogen gas station or power re-conversion). Producing hydrogen via electrolysis from water is in this connection also the most energetic method. The needed power for this process will be delivered by the waste power generated by wind and solar power plants in times of reduced energy demands.



DC power is needed for splitting the water within this electrolysis process. IPS-FEST produces the needed power supplies according to the specification of the respective application. We also deliver the necessary power supplies (DC thyristor converters and AC IGBT inverters) for the reconversion of hydrogen to power in case of need. Here the stored hydrogen is converted to DC power and is again fed into the three phase supply systems via DC/AC converters. An example for a power re-conversion: mobile fuel cell 1MW as energy source inside a container!



The container includes the power supply made by IPS-FEST, the fuel cell/electrolysis and the required control unit ready for operation. Due to the installation inside a mobile container the fuel cell is not stationary - it can be assembled anywhere.

IPS-FEST power supplies are much valued for their high operational reliability and long-life cycle. Furthermore, they prove themselves worldwide every day in the strong industrial use. They are available in liquidcooled and air-cooled construction.

Power supplies by IPS-FEST are designed in close cooperation with our customers according to the requirements of the individual application and specification. We will assist you by the implementation of your application from the planning phase until the realization.



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