

Solar Hydrogen Project at Neunburg vorm Wald, Germany

SWB
A member of the
Bayernwerk Group



Glossary



Absorption-type refrigeration unit

A machine to effect cooling by physical absorption between a liquid and gas. The energy to drive the absorption cycle is supplied by combustion of a fuel.

Alkaline fuel cell

A fuel cell using potassium hydroxide solution as the electrolyte.

Amorphous solar cells

Solar cells fabricated by vapor deposition or condensation of a suitable semiconductor material on a substrate.

Calorific-value boiler

A heating boiler in which supplementary energy is recovered by condensing part of the water vapor formed during combustion.

Catalyst

A substance that promotes a chemical reaction without itself (theoretically) undergoing chemical change.

Catalytic burner

A heating unit in which the conversion of hydrogen with oxygen is promoted by a catalyst. The reaction temperatures are much lower than with conventional combustion.

Combustion product

A chemical compound obtained as the end product of combustion.

Electric car

An automobile driven by one or more electric motors. The electrical energy may be supplied by a battery or generated continuously by a fuel cell plant.

Electrolyte

An electrically conducting substance.

Energy medium

Basically synonymous with fuel or energy form, but widely used in SWB context to denote a secondary energy form (of which hydrogen is a leading example).

Fossil fuel

Coal, petroleum, natural gas or other hydrocarbon deposit that may be used for fuel.

Fuel cell

A device to generate electricity and heat from hydrogen and oxygen.

High-temperature fuel cell

A fuel cell working at a temperature between 650 and 1,000 degrees Celsius.

Hydrogen car

An automobile powered by hydrogen as fuel.

Liquid hydrogen

Hydrogen which has been liquefied by cooling to minus 253 degrees Celsius at ambient pressure.

Low-temperature fuel cell

A fuel cell working at a temperature below about 200 degrees Celsius.

Metal hydride

A substance capable of storing hydrogen gas by absorption in metallic powder, giving off heat. The hydrogen is released when heat is subsequently applied to the metal hydride.

Monocrystalline solar cell

A solar cell consisting of a thin wafer of a single crystal.

Phosphoric acid fuel cell

A fuel cell working with phosphoric acid in matrix form as the electrolyte.

Photovoltaics

The process (or equipment) by which sunlight is directly converted to direct electric current.

Polycrystalline solar cell

A solar cell consisting of a thin wafer cut from a silicon block.

Solar cell

A sheet of semiconductor material, in which a direct current voltage is produced by the photovoltaic effect on exposure to sunlight.

Solid polymer fuel cell

A fuel cell working with a polymer electrolyte (a substance made of giant molecules).

Stack

A bank of fuel cells or electrolytic cells connected in series.

Thin-film solar cell

A solar cell fabricated by vapor deposition or condensation of a suitable semiconductor material on a substrate.

Water electrolysis

The process by which water is electrochemically decomposed into hydrogen and oxygen.