How green and blue hydrogen is made

Blue hydrogen is produced by a process of steam reduction, whereby natural gas is split into hydrogen and CO2. The carbon dioxide by-product of blue hydrogen will be safely stored under the seabed of Norway with the aid of carbon capture and storage technology.

Green hydrogen is produced via water electrolysis – i.e. extraction of oxygen and hydrogen using electricity from renewable sources. RWE and Equinor also plan to work together on renewable projects to enable them to produce green hydrogen. The two companies are investigating the options for erecting hydrogen electrolysis plants with the aid of offshore wind turbines along the pipeline.

The aim of their joint AquaSector pilot project in the North Sea, for example, is to construct a 300-MW offshore wind farm linked to electrolysis plants which would enable them to produce green hydrogen out at sea. In addition, RWE and Equinor will continue to investigate joint investment in generic offshore wind projects in Norway and Germany. The same joint approach applies to the production of green hydrogen on land in Norway.