

Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra

Bundesamt für Energie BFE

Eidgenössische Energieforschungskommission CORE

Innosuisse – Schweizerische Agentur für Innovationsförderung

Initiation of hydrogen mobility in Switzerland

Christian Bach¹, Urs Cabalzar², Patrick Stadelmann², Stefan Hiltbrand¹, Rolf Huber², Brigitte Buchmann³ ¹Automotive Powertrain Technologies Laboratory, Empa; ²H2 Energy; ³Department Mobility Energy and Environment, Empa

Hydrogen fueling station at

Inauguration of the first 350/700 bar H₂ (company) fueling station at Empa in 2016



Empa in Dübendorf and Coop in Hunzenschwil

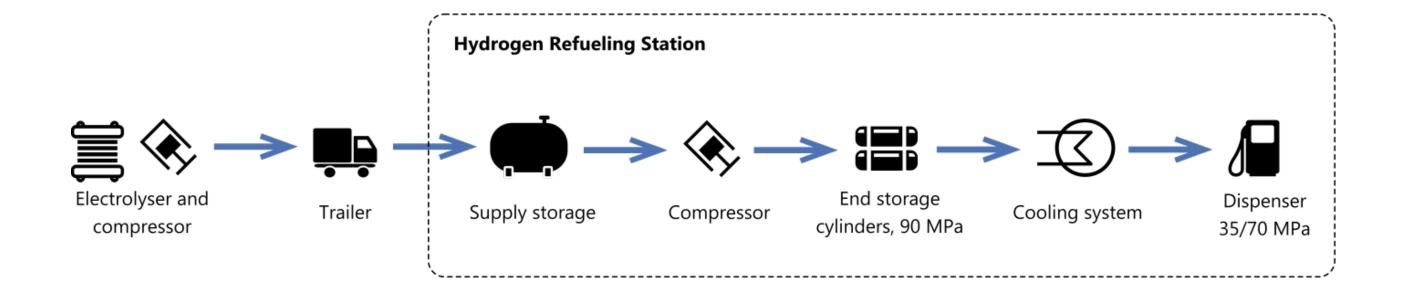
The project included the planning, approval and realization of the first two publicly accessible 350/700 bar H_2 filling stations in Switzerland. Among others, safety investigations were performed and a guideline for the approval of H_2 fueling stations was developed with representatives of the involved authorities and test centers.

The project significantly facilitated the market development of H_2 filling stations. In the meantime, 7 more filling stations are in operation or under construction.



Inauguration of the first public 350/700 bar H₂ fueling station at Coop in Hunzenschwil in 2016.

Leitfaden zum Aufbau von





Hydrogen production and distribution by H2 Energy/Eniwa in Aarau

A hydrogen production and distribution concept was developed by H2 Energy and Eniwa to supply the fueling station in Hunzenschwil. This included a 180 kW electrolyzer, operated with electricity from the run-of-river power plant in Aarau, its compression into a transport trailer and the on-road transportation to Hunzenschwil.

Production (left), compression (middle) and transport (right) of H₂ for the supply of the fueling station at Hunzenschwil

The project provided the basics for the production and distribution of hydrogen for mobility. In the meantime the company Hydrospider was funded based on these results.

Worldwide 1st 34 t H₂ truck

The world wide first hydrogen operated 34 t truck with road registration, operated by Coop was developed by Esoro, using a 100 kW fuelcell system from Swiss Hydrogen. The truck is in operation since Summer 2017 and demonstrated the capability of this powertrain technology.

In 2019, a cooperation between H2 Energy and Hyundai for the supply of 1'000 H2 trucks to Switzerland could be completed.





Energy research conference, 20 November 2020, Biel

Contact: chrisitan.bach@empa.ch urs.cabalzar@h2energy.ch