



International Partnership  
for Hydrogen and Fuel Cells  
in the Economy

## *Switzerland* Update

36<sup>th</sup> IPHE Steering Committee Meeting  
16 – 17 November 2021  
Virtual Meeting



# Announcements / New Initiatives *Switzerland*

## • Policies/Initiatives

- **Performance-related heavy vehicle charge:** under consultation: Amendment of the Federal Act on an Performance-related Heavy Vehicle Fee (1997) and the Ordinance on an Performance-related Heavy Vehicle (2000) -> Prolongation of the exemption for electric drives (<https://www.fedlex.admin.ch/de/consultation-procedures/ongoing>)
- **Development of a Swiss Hydrogen Roadmap** <https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaeft?AffairId=20204709>, and “**Green hydrogen strategy for Switzerland**”, adopted by the National Council (2021.06.17) <https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaeft?AffairId=20204406>
- **New promotion programme for hydrogen trucks (H2-SNF):** end of April 2021: promote the use of heavy-duty vehicles powered by green hydrogen (H2) started. One-off investment contribution of CHF 50,000 / annual subsidy until 2030, which covers two thirds of the additional rental costs compared to a diesel truck <https://wasserstoff.klik.ch>

## • Deployment Activities

- **2021.09.24: German-Swiss H2 forum in Konstanz** (NOW, SFOE), [press release](#)
- **Electrolysis** (run-of-river plants): 2 MW in operation since June 2020, [2.5 MW constructing](#) started (2021.09.30), 20 MW+ in planning/construction for 2022/2023.
- **2021.09.02:** Swiss company H2energy invests in [1 GW electrolysis in Denmark](#) (wind power) to supply stations and industry
- **Vehicles: 46 Hyundai XCIENT Fuel Cell trucks** on the road, new generation of XCIENT being introduced (140 in 2021). Cumulative driving range: 750,000 kilometers (May 2021). **+140 units** of the new XCIENT Fuel Cell are currently introduced in Switzerland.
- **Power-to-Gas: 2.5 MW PEM electrolysis. Construction start 2020.04.09.** Powered by waste incineration plant (15 GWh/year). CO2 from sewage gas used for biological methanisation. 18,000 MWh of renewable gas per year <https://www.powertogas.ch>

# R&D / Technology Announcements *Switzerland*

## eHRS: rapid electric charging with green hydrogen

first mobile fast charging station for electric vehicles was put into operation September 16, 2021



In pilot operation, the charging capacity of the system amounts to 60 kilowatts. In the later commercial application, the system will be operated with a charging capacity of up to 150 kilowatts per vehicle.

<https://new.abb.com/news/de/detail/82385/premiere-fur-wasserstoffbetriebene-mobile-schnellladestation>

[SI/502097 eHRS - Wasserstoff-betriebene Schnellladestation für batterieelektrische Fahrzeuge](#)

# Examples of Lessons Learned and Impact *Switzerland*

Program initiative, policy, regulation or mandate	Lessons Learned/Outcomes
Exemption from the performance-related heavy vehicle tax for trucks with electric power train	Very helpful to close the gap between fuel cell electric trucks and conventional diesel trucks
<a href="https://h2mobilitaet.ch/en/">https://h2mobilitaet.ch/en/</a> H2 Mobility Switzerland Association	Private collaboration: Generation of sufficient mass, information exchange
Continuous promotion of R&D (programmes) and targeted pilot projects	Solving fundamental issues (regulation, code, standards) with publicly funded projects





# Switzerland – Profile June 2021

## Status of Deployments

46 Trucks on the road (June 2021)  
+140 (being introduced)

Couple of MW electrolysis for green Hydrogen production either in production or planning/construction phase (run of river hydropower)

**10 public Hydrogen stations, 2 will open soon (33+ by 2023)**

**31 tons of H2 fuelled per station**  
**1.3 stations per 1 Mio. capita**

**Current availability of H2 at 95% -> increase in redundancy needed (stations, production)**

**New containers go into circulation in 2022 to cover higher demand**

## Leading Government Initiatives

Development of National Hydrogen Strategy started (parliamentary initiatives)

Performance-related heavy vehicle charge: Prolongation of the exemption for electric drives

## Goals or Focus Areas

Road transport (trucks)  
Clean aviation (Synthetic aviation fuels)

## Deployment Goals

2025: 1600 Fuel cell trucks (private initiative)  
2023: national Hydrogen refuelling network (private initiative)  
2050: 56 kT/a Hydrogen production (domestic) (see national energy perspectives for details)

## Funding

Overall funding for R&D and pilot: 27.93 million Swiss francs per year (figures 2019).

# Thank you



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