Swiss Power-to-X Tracker Analysis

January 2026

Published in January 2026 by the Coalition for Green Energy and Storage (CGES) and the Swiss Power-to-X collaborative Innovation Network (SPIN). This analysis is based on the latest version of the Swiss Power-to-X Project Tracker, a joint initiative of SPIN and CGES, and combines a CGES market analysis with a SPIN policy analysis.

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CGES and SPIN, 2026. *Swiss Power-to-X Tracker Analysis*. Coalition for Green Energy and Storage (CGES) and the Swiss Power-to-X collaborative Innovation Network (SPIN).

Accelerating the transition to sustainable energy

SPIN is the Swiss Power-to-X collaborative Innovation Network. It promotes exchange among actors from research, industry, politics, and civil society to facilitate the achievement of suitable framework conditions for P2X.

CGES is the Coalition for Green Energy and Storage. It brings together businesses, associations, academia, and public entities on a platform for exchanging ideas on how to secure sustainable solutions to the energy and climate crisis.

Executive Summary

Switzerland's Power-to-X (P2X) market has attracted significant investment since 2018. Around CHF 75 million has likely been invested in operational P2X projects through 2025, and if all announced projects are completed, total investments may require over CHF 400 million by the early 2030s.

The number and production capacity of P2X projects are expanding, but growth could soon stagnate. Between 2018 and 2025, one to five new projects became operational each year. Yet despite over 30 announced plants, only seven are planned to start operations between 2026 and 2032.

Hydrogen produced via water electrolysis dominates current P2X projects, but announced plants target more diverse outputs. As of 2025, hydrogen is the main output of operational projects, followed by methane. Announced projects expand this range to include methanol and synthetic aviation fuels (SAF).

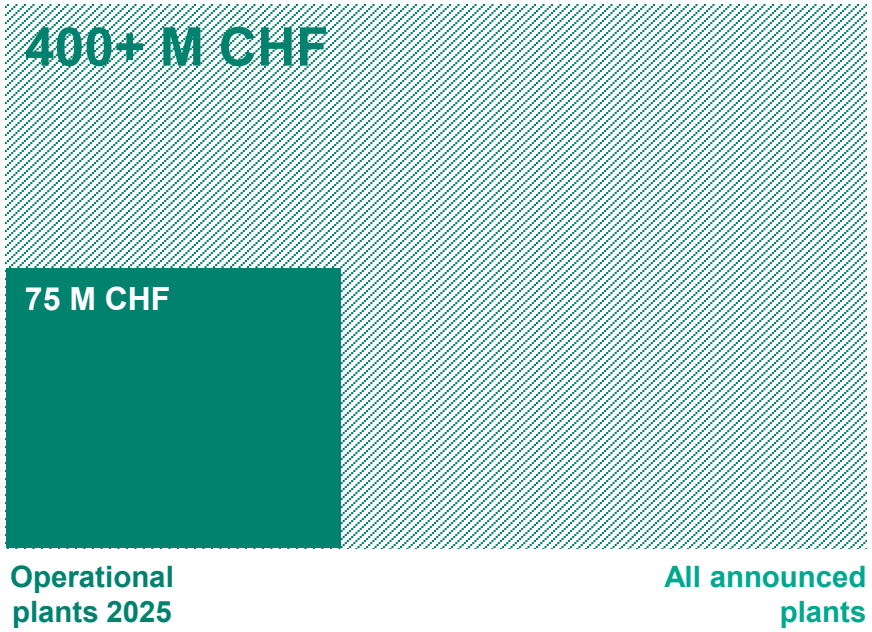
Switzerland's P2X sector has a broad stakeholder base: over 70 organizations are directly engaged in P2X projects across the country. As leading networks in this space, CGES and SPIN bring together over 60 organizations, providing direct insight into the sector's activity.

Switzerland has a favorable legal framework, but implementation challenges pose risks to P2X projects. Switzerland’s technology-open legislation and policies provide a context that could support the development of P2X projects. Yet challenges in the implementation of this framework, namely inconsistencies in the CO2 ordinance and investment barriers, threaten the realization of planned projects and could undermine Switzerland’s P2X market growth trajectory.

With strong technological foundations and a broad stakeholder base, Switzerland has the ingredients to become a leader in P2X technologies, but realizing this potential requires addressing implementation challenges to prevent growth from stopping.

Announced P2X projects in Switzerland may require over CHF 400 million in investments

Around CHF 75 million has likely already been invested in Power-to-X projects in Switzerland, based on the scale and technologies involved in operational projects across the country through 2025. If all announced projects are completed, total investments might reach over CHF 400 million by the early 2030s.



Estimates based on 16 operational plants and 36 announced plants. Estimates include only investment cost, assuming CHF 3,000 per kilo-Watt for water electrolysis plants and CHF 4,700 per kilo-Watt for biomass gasification plants. Plants with insufficient details were assumed to be based on water electrolysis and have the median size of all other plants.

Photo by Lavi Cella on Unsplash

But despite strong interest, the initial growth in P2X projects could soon stop

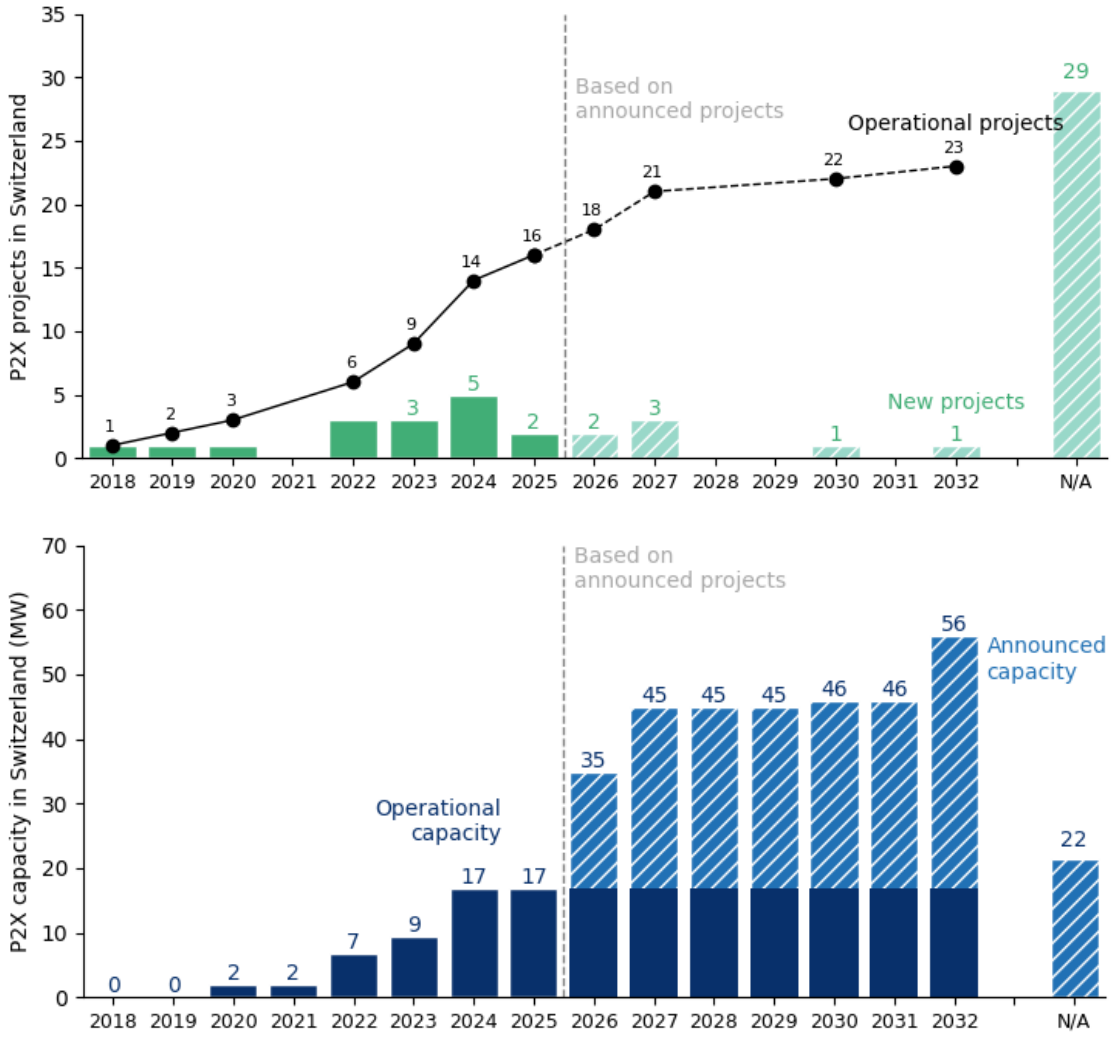
After initial growth since 2018, both the number and production capacity of P2X projects in Switzerland could stagnate

Number of P2X projects in Switzerland

- **2018-2025:** The number of P2X projects grew between 2018 and 2025, from 1 to 16, with one to five new operational projects per year.
- **2026-future:** Despite strong interest in new projects, with over 30 announced plants, growth could soon stagnate. After 2027, only two announced projects plan to start operations.

P2X production capacity in Switzerland

- **2018-2025:** Starting from a very small base, operational P2X capacity in Switzerland has grown significantly since 2018. In 2025, operational capacity reached 17 MW.
- **2026-future:** As projects scale up, the growth of operational P2X capacity could outpace the growth in the number of projects. However, the scarcity of new projects may bring P2X capacity additions to a near standstill. Project developers cite delays and pauses to explain the foreseen stagnation.

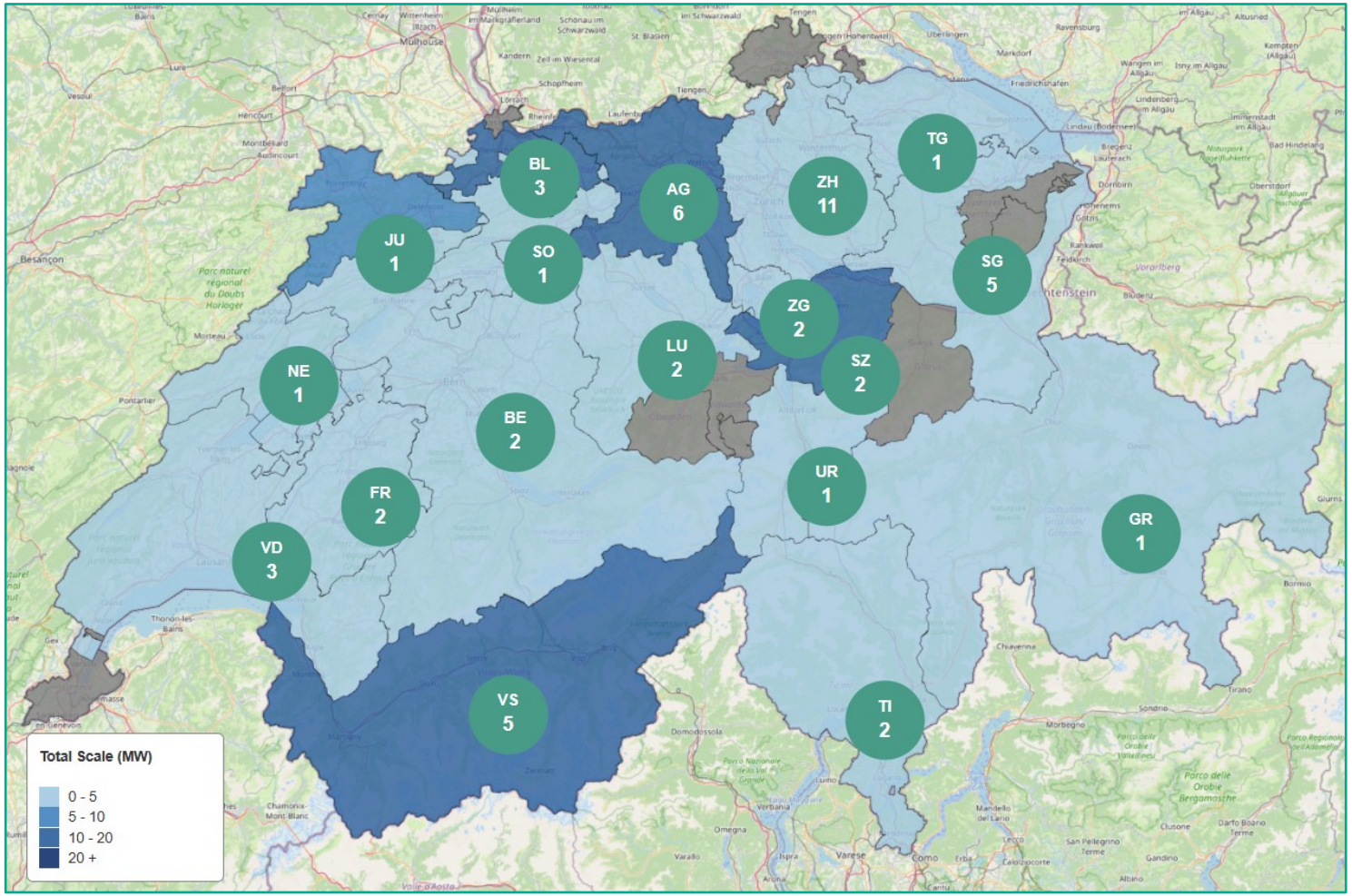


Data include projects with different outputs. Production capacity refers to the energy input required (e.g., electrolyzer capacity). N/A indicates operational and announced projects with an unknown start year of operation.

The Swiss P2X Project Tracker reveals countrywide interest in P2X projects

The Swiss P2X Project Tracker, a joint initiative by SPIN and CGES, monitors P2X projects across Switzerland.

- By the end of 2025, **over 50 projects were identified** through direct contact with SPIN and CGES partners.
- Interest in P2X projects is shared across **all regions in Switzerland**.
- While widespread, interest in P2X projects is highest in two areas:
  - **Zurich**: with the **highest number of announced projects**, Zurich is the canton that could host the most projects in Switzerland.
  - **Basel-Landschaft**: it is the canton with the **largest announced and operational production capacity**.



The number and capacity of projects per canton is the sum of all announced and operational projects with available location information based within the canton. Production capacity estimates (in MW) refer to the energy input required (e.g., electrolyzer capacity).
Grey indicates no identified projects. One project is excluded due to missing data.

High technology diversity, from hydrogen to sustainable aviation fuels production, demonstrates Switzerland's potential to be an innovation leader in P2X technologies

Projects identified by the Swiss P2X Project Tracker show high technology diversity that could increase through 2030

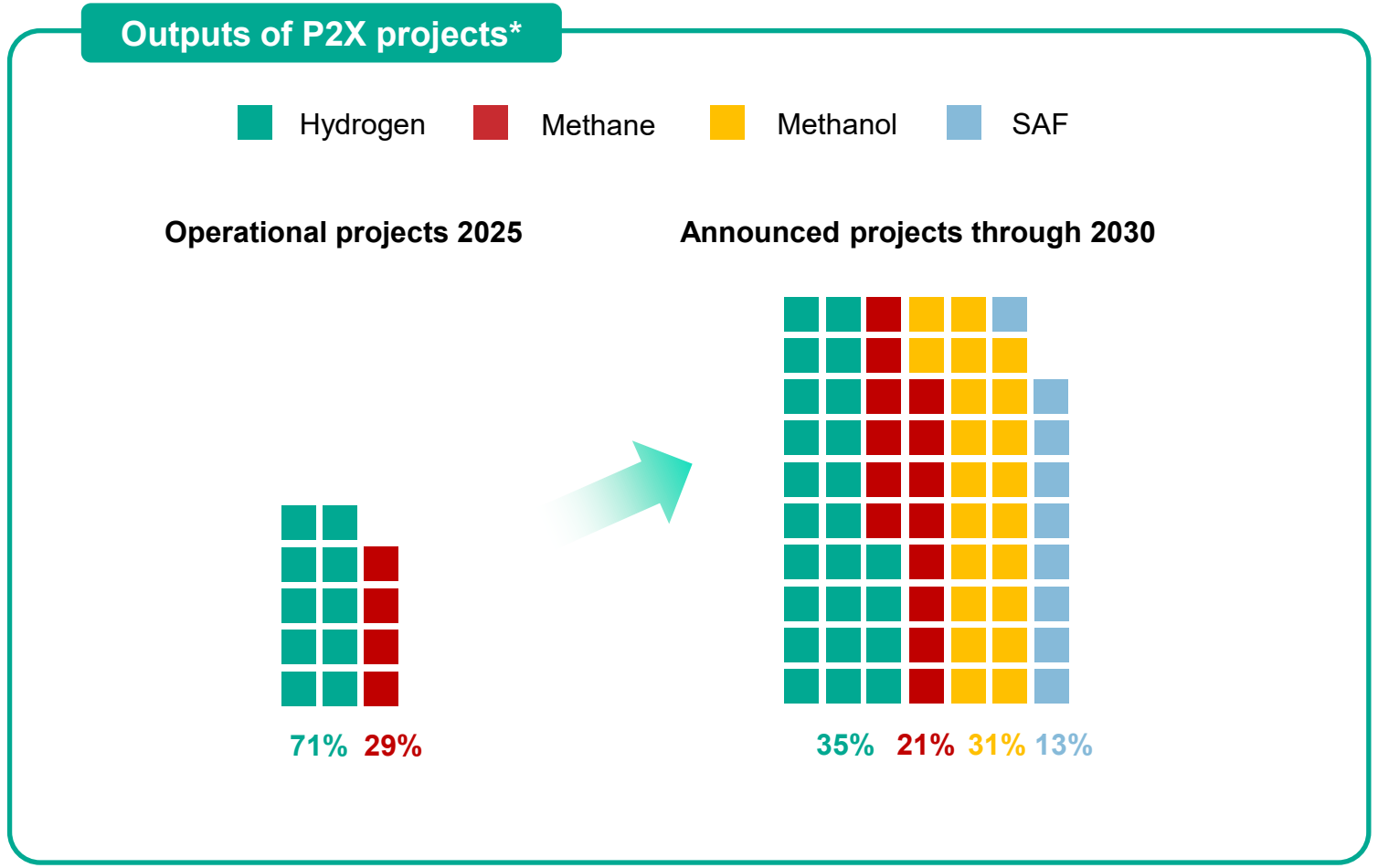
Outputs

- Among operational projects in 2025, **hydrogen is the most common output,** followed by methane.
- Announced projects through 2030 have a **higher diversity of outputs**, including methanol and sustainable aviation fuels, and several projects aim to produce multiple outputs.

Inputs

- Most P2X projects plan to use **renewable electricity as their main energy source**, while some plan to use biomass.
- Many projects aim to use captured carbon dioxide as input to produce synthetic fuels.

In addition, several projects explicitly mention their intention to integrate different **energy storage technologies.**



*Some projects have several outputs. Projects without information about target outputs are excluded.

More than 70 organizations are present across the entire value chain and drive the development of P2X projects in Switzerland

Industry

CASALE, Everllence, PARAFUEL, HV SWISS MADE REFUEL GREEN FUEL RECYCLING, Del West, CPE, helvoil, ABB, EKZ, axpo, ALPIQ, AlphaSYNT Swiss SynFuels, Synhelion, Hyundai Hydrogen Mobility Partnership with H2Energy, Linde, SMARTENERGY, HIF, Kanadevia INOVA, Limeco Das Regiowerk fürs Limmattal, BKW, INERATEC, SIDEWINDER INFRA, HYDROSPIDER, Airborn Fuels Switzerland, SIEMENS energy, EMERSON, Burckhardt Compression, GE VERNOVA, AGES GmbH MANAGEMENT CONSULTING INTERIM, finomics finance & economic advisory, swisspower, SULZER, GETEC PARK.SWISS, gaznat, INRAG Messtechnik | Automation Rohrleitungs- Apparatebau, silent POWER, BEYOND SCROLL

Offtakers

AVIA, armasuisse, SWISS, Zurich Airport, GENÈVE AÉROPORT, FPT POWERTRAIN TECHNOLOGIES, PILATUS, amag, SR Technics, SBB CFF FFS, groupe E, e-fuels 2go where the future gains energy, gaz energie

R&D

ETH zürich, EPFL, PAUL SCHERRER INSTITUT PSI, Empa, TECH CLUSTER ZUG, OST Ostschweizer Fachhochschule, n|w Fachhochschule Nordwestschweiz, zhaw School of Engineering ZAV Centre for Aviation, HEIG VD, Scuola universitaria professionale della Svizzera italiana SUPSI, Hes·so VALAIS WALLIS

Associations and others

SPN, CGES, eFuel alliance, biofuels, economiesuisse, IG PtX Erneuerbare Energien mit Zukunft, Förderverein H2 Mobilität Schweiz, INVENTA

Switzerland has a favorable legal framework for developing P2X projects, but implementation challenges put Switzerland at a strategic crossroads

Switzerland has a **favorable legal framework** for P2X projects, with **technology-open legislation**

- The CO2 Act (Art. 11a) allows vehicle manufacturers and importers to meet fleet emission targets using synthetic fuels
- The Electricity Supply Act exempts P2X projects from paying grid fees
- The Climate and Innovation Act offers funding

But **policy implementation poses important challenges** to P2X project developers through:

- **Inconsistencies in the CO2 Ordinance**
  - Tank-to-wheel instead of life-cycle assessment (LCA) is used to assess emission impacts
  - Mineral oil tax exemption only with Swiss LCA certification, although RFNBOs are accepted
- **Investment barriers**
  - Permits are granted only after construction, limited to 6 years and without grandfathering
  - Grid fee exemption is considered a subsidy, making it incompatible with some other funding opportunities

Photo by Miltiadis Fragkidis on Unsplash

The **current policy framework** in Switzerland poses **important risks**

- **Delayed ramp-up** of Power-to-X and e-kerosene
- **Missed climate targets** despite available solutions
- **Investment migration** abroad

A decision must be made to either copy EU logics or **leverage Switzerland's unique advantage**

Options:

- ✓ **Fully implement** Art. 11a of the CO2 Act, the Electricity Supply Act and the Climate and Innovation Acts **as intended**
- ✓ **Ensure regulatory coherence and long-term certainty**
- ✓ **Avoid** copying **investment-deterring parts** of EU regulation

An example of the risks threatening Swiss P2X projects: Paused renewable hydrogen project in Seewen, Schwyz

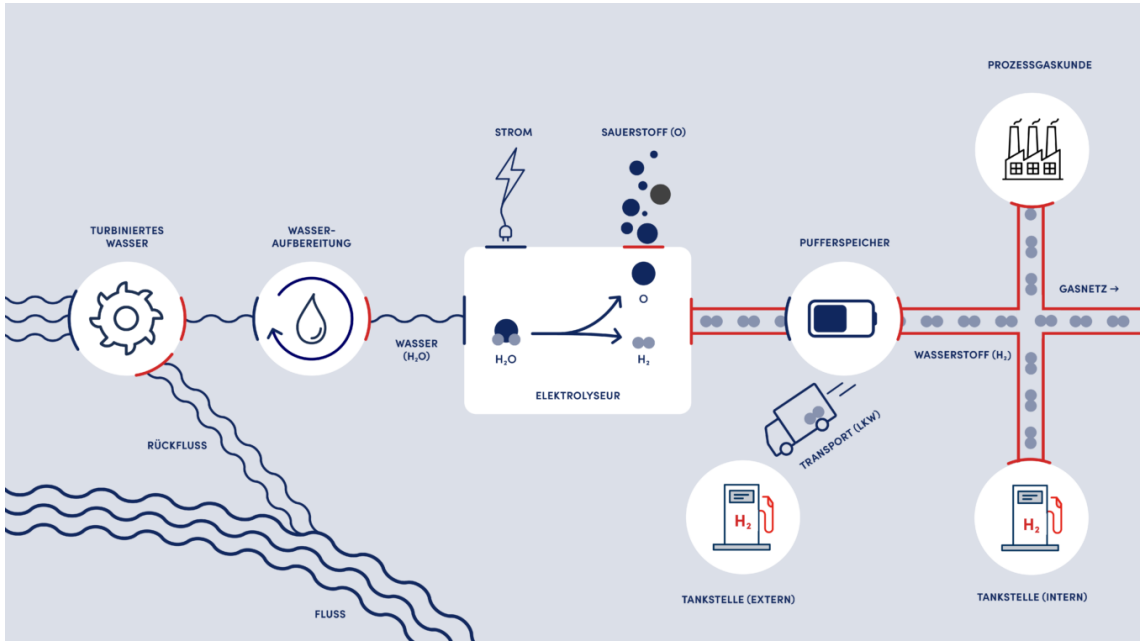
The paused project led by EBS Hydrogen AG and Käppeli Hydrogen AG is **a cautionary tale** of the risks faced by P2X projects in Switzerland.

Despite **a technically mature project** and **strong partners** announced in August 2022:[1]

- Planned facility: 5–6 MW of hydrogen production
- Target application: Hydrogen for mobility
- Target output: Operating 100 heavy-duty vehicles per day without emissions
- Climate impact: 8 million kg CO2 avoided per year (approx.)
- Investment volume: 17 million CHF (approx.)
- Main partners: EBS Hydrogen AG, Käppeli Hydrogen AG, IWB Industrielle Werke Basel
- Planned start: 2024

The project was put on hold in November, 2025,[2] not because of a technology issue, but because of **governance** and **economic viability.**

Without significant improvements in the framework conditions, many announced P2X projects across Switzerland might follow a similar path.



1 https://www.ebs.swiss/wasserstoffproduktion/
2 https://www.ebs.swiss/wasserstoff-projekt-in-seewen-wird-vorerst-gestoppt/

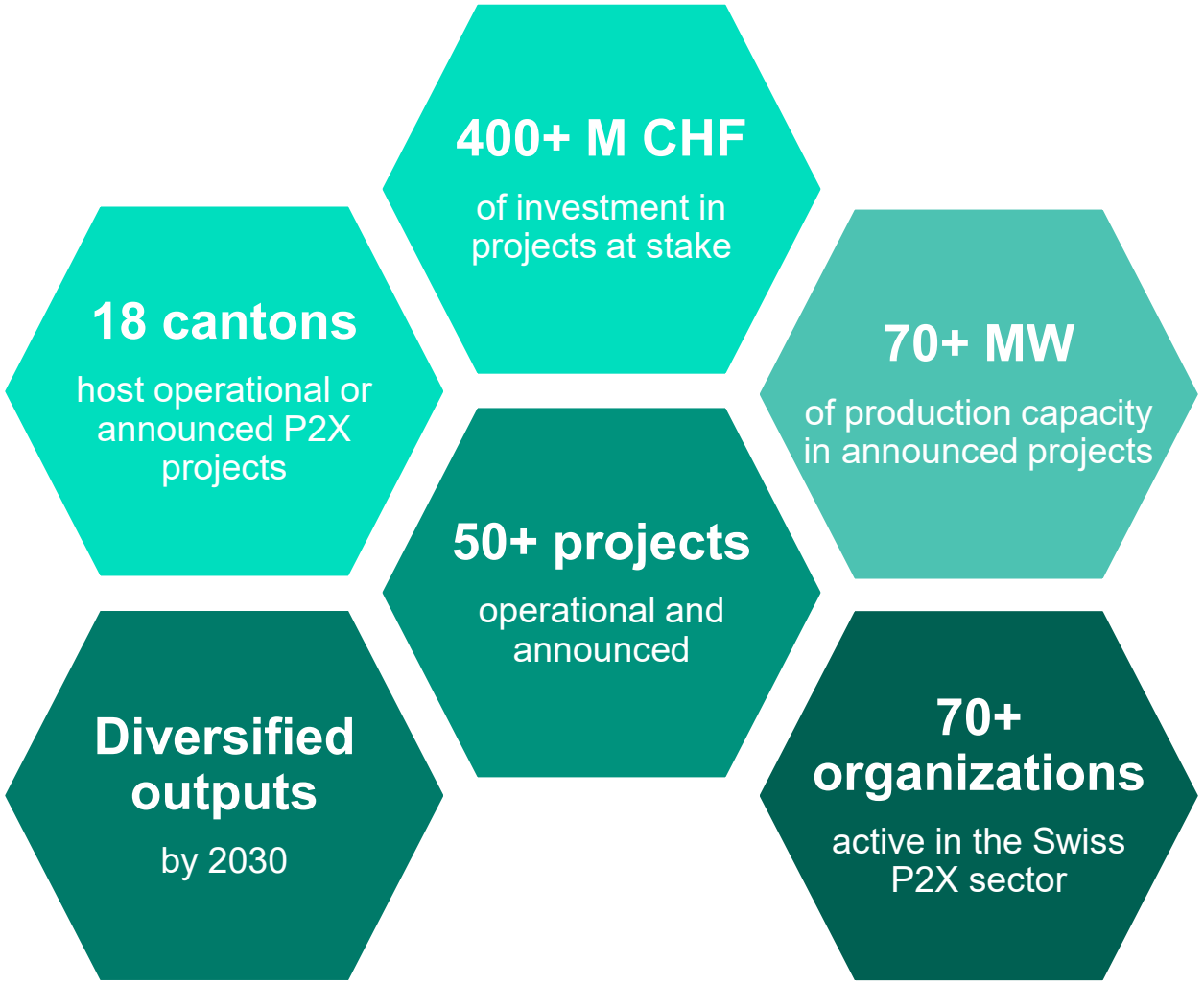
Top photo by ebs Wasserstoff AG. Bottom photos by KO-Architekten. Source: ebs Wasserstoff AG

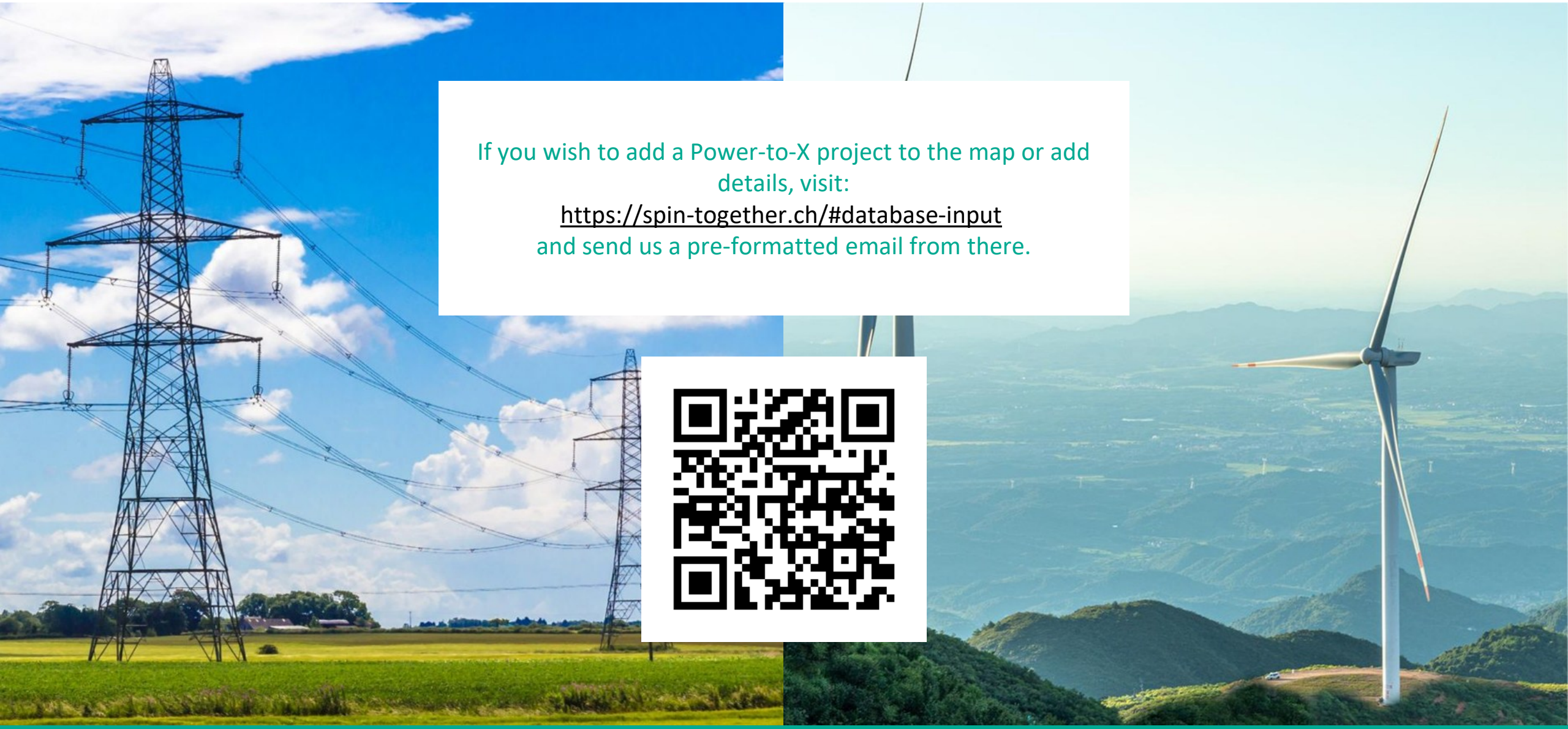
Key takeaways

The Swiss Power-to-X Project Tracker, a joint initiative by SPIN and CGES, helps **create transparency** and **facilitates collaboration**. This analysis reveals that:

- **Announced Power-to-X (P2X) projects in Switzerland** might require **over CHF 400 million in investments,**
- But despite strong interest, the initial growth in **P2X projects could soon stagnate.**
- The **Swiss P2X Project Tracker** reveals **countrywide interest** in P2X projects, with leading hubs around Zurich and Basel.
- The **high technology diversity** of P2X projects, ranging from hydrogen to sustainable aviation fuels production, demonstrates Switzerland's **potential to be an innovation leader.**
- With **more than 70 organizations** active across the entire value chain, **Switzerland has the ingredients** for developing a P2X ecosystem,
- But **policy implementation poses important challenges** to P2X developers, despite a favorable legal framework.

Switzerland has the ingredients to lead in P2X, but realizing this potential will require decisive action to improve framework conditions.





If you wish to add a Power-to-X project to the map or add details, visit:
https://spin-together.ch/#database-input
and send us a pre-formatted email from there.

Appendix: Project data used to estimate investment requirements

Project title	Location	Status	Input process	Scale (MWe)	Investment
Synhelion solar mini-refinery	Zürich	Operational	Electrolyzer	0,005	Estimation*
High-temperature electrolysis	Rapperswil SG	Operational	Electrolyzer	0,010	Estimation*
Storage with methanol	Brütten	Concept	Electrolyzer	0,0145	Estimation*
Innosuisse Flagship GreenHub	Horgen	FID/construction	Electrolyzer	0,025	Confidential
rSOC	Sion	Operational	Electrolyzer	0,025	Estimation*
Environmental houses Urdorf	Urdorf	Operational	Electrolyzer	0,300	Estimation*
Gaznat Innovation Lab, GreenGas Project	Aigle	Operational	Electrolyzer	0,5	Estimation*
Solid waste storage (biomass & plastic waste) to supply energy on demand	Colombier NE	Feasibility study	Bio-based	1	Confidential
Hydrospider Gösgen (Phase 1)	Niedergösgen	Operational	Electrolyzer	2	Estimation*
Wasserstoffproduktion Ostschweiz AG	St. Gallen	Operational	Electrolyzer	2	Estimation*
First hydrogen production plant in Central Switzerland.	Bürglen UR	FID/construction	Electrolyzer	2	Estimation*
Groupe E Schiffenen	Fribourg	Operational	Electrolyzer	2	Estimation*
Gruyere H2 Power Bulle	Bulle	Operational	Electrolyzer	2	Estimation*
PtG Switzerland Dietikon	Dietikon	Operational	Electrolyzer	2,5	Estimation*
Production of climate-friendly hydrogen at the Augst power plant	Augst BL	Feasibility study	Electrolyzer	2,5	Estimation*
Axpo Green Hydrogen Domat/Ems/Reichenau	Domat/Ems	Operational	Electrolyzer	2,5	Estimation*
Kanadevia Inova PtH Buchs Green Hydrogen Production Facility	Buchs AG	Operational	Electrolyzer	3	Estimation*
Green Methanol synthesis demonstrator	Zug	Feasibility study	Electrolyzer	3	Estimation*
H2 from wood pyrolysis (Planair)	Glovelier	Feasibility study	Bio-based	5	Confidential
MW eFuel Scale-up Project Chablais	Monthey	Feasibility study	Electrolyzer	5	Estimation*
Djeva PtH	Monthey	Not available	Electrolyzer	7	Estimation*
Hydrogen Höfe Freienbach (Phase 1)	Freienbach	FID/construction	Electrolyzer	10	Estimation*
DIPS (Demonstration Plant And Innovation Platform For Synthetic SAF Sisslerfeld)	Sisseln AG	Feasibility study	Electrolyzer	10	Estimation*
H2 for transport + H2 trade (IWB)	Birsfelden	Feasibility study	Electrolyzer	15	Estimation*

*Estimates include only investment cost, assuming CHF 3,000 per kilo-Watt for water electrolysis plants and CHF 4,700 per kilo-Watt for biomass gasification plants.
Plants with insufficient details were assumed to be based on water electrolysis and have the median size of all other plants (2 MW).