



Demo #6 (Geneva, Switzerland): AI-enabled Green Hydrogen Public Transport Services

Integrating AI algorithms into hydrogen public transportation services in the Geneva Canton area of Switzerland, to reduce fuel energy consumption and minimize wait times.

Storage INNOvations for Green
ENERgy Systems

Key Technologies & Innovations

- Hydrogen storage and distribution
- Intelligent energy forecasting
- Smart mobility analytics
- Integrated urban transport energy management

Contributing to SINNOGENES' vision for a sustainable and highly intelligent transport ecosystem.

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Storage *INNO*vations for *Green*
ENERgy Systems.



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Partners



Demo #6 – Geneva Canton, Switzerland



Demo #6 is located in the Champagne/Mandement area of Geneva, fully integrating hydrogen vehicles into an on-demand service, collecting specific vehicle data and establishing a convenient refueling method. The goal is to provide outer-city passengers with access to the center of the city.

A hydrogen-based energy system is being implemented to optimize storage and distribution within Geneva’s public transport network.

The system integrates solar-powered electrolysis, producing hydrogen that is compressed and stored and then dispatched to refueling stations supplying public transport vehicles.

Advanced energy forecasting and smart consumption controls will ensure continuous supervision and optimization, balancing supply with demand across the network.

Green Hydrogen Refueling Station

- Electrolyzer with PEM (< 1MW power, 30 bars hydrogen output pressure)
- Piston compressor
- 500/520 bars storage container
- 350 bars filling gun (without cooling)

