Limeco
Das Regiowerk fürs Limmattal

Media release

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Flagship project at Limeco in Dietikon: Inauguration of the first industrial power-to-gas plant in Switzerland

The Regiowerk Limeco in the Limmat Valley has developed the first industrial power-to-gas plant in Switzerland in Dietikon, in cooperation with eight Swiss energy suppliers and Swisspower, the municipal utilities alliance . Today's inauguration represents the culmination of an important objective for the project partners: proof that power-to-gas plants can work on a large scale and contribute to supplying the nation with renewable gas.

A truly big day for everyone involved: Today you have inaugurated Switzerland's first industrial power-to-gas plant in Dietikon in the presence of Zurich Cantonal Government Councillor Martin Neukom as well as Benoît Revaz, Director of the Swiss Federal Office of Energy (SFOE). With an electrolytic capacity of 2.5 megawatts (MW), it produces around 18 gigawatt hours (GWh) of synthetic renewable gas per year. The plant therefore makes an important contribution to the decarbonisation of our nation. Up to 5,000 tons of CO_2 can be saved every year as a result.

"It is crucial that Switzerland becomes less dependent on foreign natural gas," stated SFOE Director Benoît Revaz at the inauguration ceremony. "The power-to-gas plant shows that domestic production of renewable gas is indeed possible." Federal Councillor Eric Nussbaumer (SP) also emphasised: "Power-to-gas not only makes a contribution towards climate neutrality, but also towards responsible economic policy." For Zurich Cantonal Government Councillor Martin Neukom, the system shows just how progressive the canton of Zurich is: “We are striving to become climate neutral by 2040. Limeco and its partners are proving this to be realisable - also thanks to innovative technologies such as power-to-gas."

Ideal location
“The waste incineration plant and the sewage treatment facility are located right next to one another. That's why Limeco has the perfect conditions to produce green gas," explained Stefano Kunz, Chairman of the Board of Directors of Limeco and Town Councillor for Schlieren. This is how it works: The power-to-gas facility uses renewable electricity from the waste incineration plant to produce hydrogen. This is mixed with the CO_2 in the sewage gas, resulting in renewable methane gas. Limeco thereby obtains a renewable energy source from waste and sewage. When fed into the existing gas grid, the CO_2-neutral gas provides a replacement for fossil fuels.

Strong partnership and support from the federal government
The showcase project is made possible thanks to the eight Swiss energy suppliers which, as gas consumers, are co-financing the investment of around 14 million Swiss francs: Eniwa AG, Energie Zürichsee Linth AG, St. Galler Stadtwerke, Energie Wasser Bern, the gas and water utilities of Dietikon and Schlieren, SWL Energie AG and Industrielle Betriebe Interlaken. They acquire the ecological benefit of the gas via certificates and sell it to their end customers at the exit point. With Hitachi Zosen Inova Schmack GmbH and Siemens Energy AG, proven specialists for process engineering and the various components of the power-to-gas process, are also on board. “The new system shows that the municipal utilities are not just talking about the energy transition, but that they are forging ahead with a great deal of initiative," enthused Ronny Kaufmann, CEO of the municipal utilities alliance Swisspower, which co-initiated the project. The SFOE supports the project as part of its pilot and demonstration program, and the project is also funded by the cantonal department for Waste, Water, Energy and Air (AWEL).

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Power-to-gas enables the storage of renewable energy
The facility is making a substantial contribution towards the transformation of the Swiss energy system. The Energy Strategy 2050 envisages replacing electricity from nuclear power with solar, water and wind power. This means that much more electricity will be produced in the summer than is consumed. In the winter, on the other hand, when energy requirements are greater, Switzerland will have to import electricity. Power-to-gas is a key technology for storing surplus renewable electricity on a seasonal basis.

Key figures for the power-to-gas plant

Location: Limeco, Dietikon
Capacity (electrolysis): 2.5 MW or 450 m^3 hydrogen per hour
Power production by the WIP: 10 to 15 GWh annually
Sewage gas used: 1.8 million m^3 per year
Planned annual production: approx. 18 GWh of renewable gas
CO_2 reduction: 4,000 to 5,000 t per year (corresponding to the emissions from around 2,000 households)

Strong cooperation – strong partners

Limeco
Limeco is the builder and operator of the power-to-gas facility. As a regional plant in Dietikon, Limeco supplies the Limmat Valley with climate-friendly energy. Towards this end, it operates a large district heating network, which will be further expanded over the next few years, as well as a sewage treatment facility and a waste incineration plant.

Cooperation partners
Eight Swiss energy suppliers are financing the power-to-gas facility by purchasing certificates for the green gas produced and supplying their customers with synthetic renewable gas from Switzerland.
The cooperation partners are: Eniwa AG, Energie Zürichsee Linth AG, St. Galler Stadtwerke, Energie Wasser Bern, the gas and water utilities of Dietikon and Schlieren, SWL Energie AG and Industrielle Betriebe Interlaken.

Swisspower AG
Swisspower, the strategic alliance of 22 Swiss municipal utility providers and regional companies in the utility industry, is a co-initiator and consultant for the realisation of the flagship project. It is compliant with the Master Plan 2050, the joint vision of the alliance partners for a completely renewable energy supply without CO_2 emissions.

Technology partners and overall project management
System engineering and technology partner for methane production: Hitachi Zosen Inova Schmack GmbH
Technology partner for electrolysis: Siemens Energy AG
Overall project management: TBF + Partner AG

Further information on the project can be found on the website www.powertogas.ch

Queries
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