



# HYDROGEN FROM WASTEWATER

HOW CAN WASTEWATER TREATMENT PLANTS CONTRIBUTE TO THE WATER-ENERGY SECTOR NEXUS AND PRODUCE GREEN HYDROGEN FROM WASTEWATER USING ENERGY SYNERGIES?

 18.07.2024

 Neu-Ulm

The Ulm Steinhäule sewage treatment plant is to investigate whether it makes sense to use an electrolyser that runs exclusively on wastewater on its own premises. This would allow water reuse to be realised and hydrogen production would not burden the city's drinking water supply. This is particularly important in summer, when high yields from photovoltaics lead to high hydrogen production, but the drinking water reserves are heavily used by the city's population on these hot days and compete with each other.

We will be discussing the opportunities, potential and challenges of hydrogen production at the wastewater treatment plant with a number of experts from the fields of water, wastewater and hydrogen production. The wastewater treatment plant has great synergy potential as it can produce hydrogen using green energy. The resulting waste heat can be fed into a district heating network together with other internal waste heat sources. In addition, the oxygen produced during electrolysis is used for wastewater treatment, which can save considerable amounts of energy. Above all, however, the wastewater from the sewage treatment plant can be used as a water resource for the electrolyser, which can save large quantities of drinking water.

ZVK is organising this event together with Umwelttechnik BW the ZVK, the KIT and the University of Kassel as part of the KA4H2 funding project of the Baden-Württemberg Ministry for the Environment, Climate Protection and the Energy Sector.

AGENDA: 18.07.2024 1 pm until 5pm

## **Welcome and synergies of hydrogen production at the Steinhäule wastewater treatment plant**

Erwin Schäfer and Jonathan Fuchs, Zweckverband Klärwerk Steinhäule (ZVK), New Ulm

## **Hydrogen at wastewater treatment plants as an opportunity for cities**

Jürgen Schmidtke, Umwelttechnik BW, Stuttgart

## **Water requirements of hydrogen electrolysers**

Prof. Dr Harald Horn and Dr Saravia, Florencia, DVGW Engler-Bunte Institute at the Karlsruhe Institute of Technology (KIT), Karlsruhe

## **Treatment of wastewater treatment plant effluent to ultrapure water for water electrolysis**

Dr Saravia, Florencia and Jan, Singer, DVGW Engler-Bunte Institute at the Karlsruhe Institute of Technology (KIT), Karlsruhe

## **Hydrogen production at wastewater treatment plants in BW - An initial assessment**

Prof. Dr Tobias Morck and Dr Philipp Otter, University of Kassel

## **Guided tour of the Ulm Steinhäule wastewater treatment plant**

**Adress:** Zweckverband Klärwerk Steinhäule (ZVK), Reinzstraße 1, 89233 Neu-Ulm

**Registration:** <https://events.umwelttechnik-bw.de/de/veranstaltung/wasserstoff-abwasser>