HC-H2
Hydrogen News
Issue 02 | 2023

Good News

Measures for a "Good Climate for North Rhine-Westphalia"

The state government of North Rhine-Westphalia (NRW) has presented its **first package of climate protection measures**, as it looks to get to grips with the issue using the hashtag #goodclimatefuture (a good climate for NRW). It contains 68 measures in seven key fields of action, which aim to make North Rhine-Westphalia the first carbon-neutral industrial region in Europe. Around € 2 billion will be used to fund climate protection measures in 2023 and 2024, particularly in the areas of environmentally friendly mobility, the transformation of the heating sector, and the accelerated expansion of wind power and photovoltaics, as well as climate protection projects within the framework of EU programmes. ▸ Read more

Good News for Regional Producers of Green Hydrogen

A **meta-analysis on hydrogen costs and requirements** for the transformation to net-zero emissions conducted by the Wuppertal Institute on behalf of North Rhine-Westphalia's renewable energy association (LEE NRW) confirms that local green hydrogen is more competitive than expected. This study serves to update a hydrogen study conducted in 2020 looking ahead to the year 2030 and highlights the advantages of green hydrogen from local renewable energy sources, particularly with regard to the whole system perspective. ▸ Read more

HC-H2 close up

HC-H2 Lego Model Receives an Upgrade

The HC-H2 Lego model is a building block representation of the **hydrogen industry in the Rhenish mining area** (Rheinisches Revier). The implementation of innovative hydrogen technologies in HC-H2 projects at various locations and different sections of the Rhenish mining area has been recreated in detail. The Lego model can now also be transported – a mobile frame and a new protective cover that protects against dust and dirt allow the model to be taken to other important events. If you would like to see the miniature HC-H2 hydrogen model up close or display the model at one of your events, then feel free to contact us at any time at connect@hch2.de.

First Scientific Publication at INW

In cooperation with Friedrich-Alexander-Universität Erlangen-Nürnberg, the Helmholtz Institute Erlangen-Nürnberg for Renewable Energy and the Fraunhofer Institute for Solar Energy Systems (ISE), researchers at the **Institute for a Sustainable Hydrogen Economy (INW)** have shown that **chemical hydrogen storage technologies** are particularly useful for point-to-point transport of renewable hydrogen over long distances. The cooperation is particularly focused on the $DMCC/H_2$ storage cycle. There has been little research into this topic until now, but it is highly promising for the transport of renewable hydrogen over long distances. ▸ Read more

Summer Party at Brainergy Park

Forschungszentrum Jülich's Institute for a Sustainable Hydrogen Economy (INW) is still growing in size. It has set itself the ambitious goal to have around 400 employees by the end of 2025. Everyone at the institute is in good spirits and there is a real excitement about the new colleagues. The subinstitutes INW-1 (Infrastructure and Scientific Coordination), which is headed by Dr. Susanne Spörler, and INW-D (H2 Demonstration Projects), which is headed by Prof. Peter Wasserscheid, now have almost all the employees they require and are focused on the goals of the Helmholtz Hydrogen Cluster HC-H2 and the implementation of hydrogen projects in the Rhenish mining area. Before colleagues at INW headed off for their well-earned summer holidays, they met for a summer party at Brainergy Park. Together they ensured that there was enough food to go round and an enjoyable barbecue evening was held directly in front of the mobile office containers.

Focus on the Rhenish Mining Area

The Path to Successful Structural Change in the Rhenish Mining Area

A 2.0 update of the Rhineland transition agreement (Reviervertrag) has been concluded. It complements important measures that finally create the framework conditions and prerequisites for the Rhenish mining area and the people who live here. In order to bring about structural change and a good future quickly and sustainably by 2030, various stakeholders must work together and need the support of the federal and state governments. Minister President Hendrik Wüst and Deputy Minister President Mona Neubaur spoke about the upcoming tasks and the support that will be provided at the signing of the agreement at Hugo Junkers Hangar in Mönchengladbach. At the event, which was organized by Zukunftsagentur Rheinisches Revier and **focused on the prospects for the Rhenish mining area**, other political stakeholders were in attendance as well as the media, the relevant chambers of industry and commerce, representatives of the neighbouring municipalities, and others involved in the process of structural change. ▸ Read more

Hydrogen Refueling Station Begins Normal Operation in Düren

The **new hydrogen refueling station** operated by H2 MOBILITÄT Deutschland is celebrating its soft opening on the A4 motorway in Düren between Cologne and Aachen. Over the last six months, the station has been running in operational optimization mode to ensure that any final adjustments could be made on the ground. Since mid-June, the hydrogen refueling station powered by technology from industrial gases company Air Liquide has been in regular operation, thus closing the supply gap between Cologne and Aachen. ▸ Read more

IN4climate.RR | Future Laboratory for the Industrial Use of Hydrogen

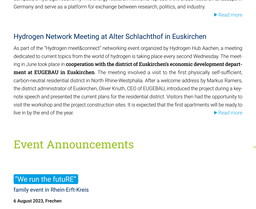
Industry participation is a significant goal in the implementation of HC-H2 demonstration projects. To strengthen this participation, networking and collaborating with other strong players in the Rhenish mining area, such as the IN4climate.RR project, is essential. The aim of IN4climate.RR is to **support industrial transformation in the Rhenish mining area** in various segments. The project, which was jointly initiated by the Wuppertal Institute and NRW.EnergyAllCimate, boasts a strong team that supports innovative companies and projects, pools and shares knowledge about transformation processes with stakeholders from the Rhenish mining area, and organizes networking and working formats. One of the focal topics of the project is the industrial hydrogen economy in the Rhenish mining area. This topic has given rise to one of three "future laboratories" that have been organized by the IN4climate.RR project. This format provides a platform for relevant stakeholders from across the entire industrial hydrogen value chain in the region to come together, to discuss the hurdles and obstacles that must be overcome on the way to the hydrogen economy up and running, and to work on solutions. In smaller working groups, the stakeholders will in future focus on key topics such as identifying hydrogen demand, connecting rural areas and industry, and approval procedures. ▸ Read more

Thyssengas is H_2-READY

As a gas transmission system operator, hydrogen has become a highly important topic for Thyssengas. The company has committed itself to becoming one of the leading network operators for hydrogen and other green gases in Germany. To this end, Thyssengas recently designed an **animated network map**, which displays the pipeline routes as well as the focal points of consumption in the respective regions. Based on market surveys and in close dialogue with customers and market participants, six regional hydrogen clusters were identified as the basis for this initial network. ▸ Read more

HC-H2 Documentary Series: What is it?

This Time: Climate Change



The fluvial catastrophe in 2021 has left deep scars. Here you can see the river Inde breaking into the Inden open-pit mine.

The biggest catastrophe in the history of life on earth is a mass extinction event 251 million years ago, at the Permian-Triassic boundary, which wiped out more than 90 % of all marine species and over 75 % of all land animals. One of the main causes of this were millennia of mega-volcanic eruptions in what is now Siberia on a scale that would be unimaginable by today's standards. Current research suggests that the global temperature has risen by 5–8 degrees Celsius within 10,000 years as a result of the greenhouse effect caused by volcanic eruptions. "The amounts of CO_2 currently being emitted per year are about 14 times higher than peak emissions during the extinction of the Permian-Triassic boundary. We must prevent a tipping point from being reached in the climate crisis in order to keep the Earth's system in balance and to ensure that life on Earth can survive once again. ▸ Read more

Events

HC-H2 Model at NRW State Government's Summer Party

Colleagues of Forschungszentrum Jülich and INW were on tour in Berlin with the HC-H2 Lego model. This time they were present at the NRW state government's summer party. As part of Forschungszentrum Jülich's exciting science lounge, employees used the model to showcase the **innovative hydrogen projects of the future in the Rhenish mining area**. The model attracted the attention of a large number of interested guests, including NRW Minister-President Hendrik Wüst, NRW science minister Ina Brandes, and NRW economy minister Mona Neubaur. With each future hydrogen project, the **HC-H2 cluster is making a contribution to a future net-zero energy industry** and to the success of structural change in the Rhenish mining area. ▸ Read more

The Hydrogen Industry is No "One-Wo.Man-Show"

The innovation, environment, location, and foreign trade departments of the Aachen Chamber of Industry and Commerce (IHK) recently visited the John Cockerill Group and the CRM Group in Belgium, helping to promote collaboration and **europlanet networking in the hydrogen industry**. Ultimately, the **complexity of the hydrogen value chain** requires collaboration across national borders. IHK Aachen and their partners organized the event as part of the regional EMEB (Enterprise Mobility Center) consortium, supported by the IHK NRW and AHK Benelux. The aim was to get to know each other better as well as the hydrogen landscape on both sides. ▸ Read more

Second Meeting of the Neighbours of Brainergy Park

After the **first HC-H2 Brainergy Park Connect event** was positively received, a second event was staged on 7 June. INW hosted a networking lunch to discuss current and future technology topics at Brainergy Park. Brainergy Park is an intercommunal and innovative new industrial park in the north of the town of Jülich, which is being built according to the latest sustainable technology. New jobs are to be created here in the Rhenish mining area over the next few years. Initial construction activities can already be seen, with more set to follow. This time, INW-4 was introduced by Prof. Andreas Peschel. "In the future, when a plant is commissioned and put into operation as part of our projects in the Rhineland, INW-4 will certainly be involved." ▸ Read more

Promotion of Hydrogen Collaborations

Hydrogen Hub Aachen, the service and advice centre for regional industrial initiatives, the h2 network-ruhr hydrogen network, and the Dutch–German Chamber of Commerce (DNHK) hosted an event in Aachen at the start of June focused on overcoming borders and the potential of European collaborations for the hydrogen economy of the future. The aim of the event was to **bring together industrial representatives from the cross-border region** between the Netherlands and North Rhine-Westphalia and to discuss specific opportunities for cooperation over hydrogen. During a panel discussion, the participants spoke about the potential of transnational cooperation as well as challenges such as the various application processes of the neighbouring countries and protracted approval procedures. ▸ Read more

Energy Research Networks in Berlin

The 1st symposium of the energy research networks (*Forschungsnetzwerke Energie*) in Berlin was held from 13 to 14 June. In his opening address, Federal Minister for Economic Affairs Dr. Robert Habeck stressed the importance of the links between energy research and value creation: "Energy research also means research into renewing locations." Funded by the Federal Ministry for Economic Affairs and Climate Action (BMWK), the symposium provided network members with a good opportunity to exchange ideas on the subjects of bioenergy, energy transition in the building sector, renewable energy, flexible energy conversion, industry and commerce, power grids, start-ups, systems analysis, and hydrogen. HC-H2 was present at the event with two posters and information material on the sustainable and infrastructure-compatible hydrogen economy. The energy research networks represent the broad research landscape in Germany and serve as a platform for exchange between research, politics, and industry. ▸ Read more

Hydrogen Network Meeting at Alter Schlachthof in Euskirchen

As part of the "hydrogen meetConnect" networking event organized by Hydrogen Hub Aachen, a meeting dedicated to current topics from the world of hydrogen is taking place every second Wednesday. The meeting in June took place in **cooperation with the district of Euskirchen's economic development department at EUGEBAU in Euskirchen**. The meeting involved a visit to the first physically self-sufficient, carbon-neutral residential district in North Rhine-Westphalia. After a welcome address by Markus Ramers, the district administrator of Euskirchen, Oliver Knuth, CEO of EUGEBAU, introduced the project during a keynote speech and presented the current plans for the residential district. Visitors then had the opportunity to visit the workshop and the project construction sites. It is expected that the first apartments will be ready to live in by the end of the year. ▸ Read more

Event Announcements

"We run the futuRE"
family event in Rhein-Erft-Kreis

6 August 2023, Frechen

Hydrogen Trade Fair
in the Düren district

18 and 19 August 2023, Brückenkopfpark Jülich

Open House
for North Rhine-Westphalian state government buildings

26 and 27 August 2023, Düsseldorf

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