

Joint press release

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The Ruhr as a pioneer region of the hydrogen economy: Eight companies and institutions are developing a cross-sectoral development plan for hydrogen infrastructure and production. The aim is for the region to drive forward the green transformation faster, more connectedly and more sustainably.

E.ON, Evonik, RWE, thyssenkrupp and Vonovia have joined forces with the Max Planck Institute for Chemical Energy Conversion, the RWI – Leibniz Institute for Economic Research and the Alfred Krupp von Bohlen und Halbach-Foundation to accelerate the green transformation on the Rhine and Ruhr. A cross-sectoral future plan for a model hydrogen region is to be developed in a joint project. The aim is to connect pioneering solutions from industry, the energy sector, mobility and housing in order to make the Ruhr a pioneering region for a successful energy transformation.

Our aim: The Ruhr region is to become the industrial, residential and living area with CO₂-free hydrogen in Germany and thus set standards for a hydrogen economy in industrial conurbations. The project is intended to lay the groundwork for the necessary planning for infrastructure and production.

Our task: The transformation of one of Germany's largest industrial core regions such as the Ruhr, home to 6.2 percent of the country's population, is a considerable challenge. It requires determining the cross-sectoral hydrogen demand, measuring the expansion of renewable energies or alternative hydrogen imports required for this purpose, and identifying the necessary transport infrastructure. The data collected will be used to create a roadmap that can be used to optimally align coordinated infrastructure investments with private sector investment cycles. Such a roadmap is a prerequisite for creating planning security for all parties involved and for making the region an attractive investment location. No other German region has a better starting position to solve this task: With unique connections across all sectors, synergies in generation, storage, distribution and consumption can be leveraged in the Ruhr region. The conditions for developing a comprehensive hydrogen infrastructure are ideal.

Our aspiration: We want the Ruhr region to become a leading model hydrogen region – with a holistic, cross-sectoral development plan for hydrogen production and infrastructure. The project aims to map out the transformation in concrete terms and launch pilot projects that will provide at least 50 percent of the hydrogen required in the region with low greenhouse gas emissions by 2030. As a result, the project is expected to contribute significantly and rapidly to the reduction of CO₂ emissions in the Ruhr region, while maintaining it as an efficient industrial region.

Our partners: Integrated planning that can make the Ruhr a pioneer of the hydrogen economy needs scientific expertise and committed companies with the will to shape and transform. However, it also needs political support from the federal and state governments in order to lay

the foundations for an accelerated green transformation of the Ruhr region as a unique ecosystem/network.

Prof. Dr. Dr. h. c. Ursula Gather, Chairwoman of the Board of Trustees of the Alfred Krupp von Bohlen und Halbach-Foundation: "The green transformation can only succeed at scale through innovation across value chains. This is because the scale of the challenges is too great to solve alone. New innovation ecosystems are needed to help achieve a breakthrough in the energy transformation and climate neutrality. However, such an ecosystem can only be successful if players from different areas of society, such as industry and research, work together in a well-moderated manner. In this respect, the Ruhr region is best placed for shaping the green transformation successfully and to drive forward the energy transformation for Germany."

Leo Birnbaum, Chairman of the Board of Management of E.ON S.E.: "By 2030, we as a company aim to reduce our CO₂ emissions by 65 percent. We have 9 years or just over 100 months to fundamentally change our energy system and build up locally generated and green energy. For E.ON, this means building up the electricity and hydrogen infrastructure at record speed and developing efficient systems to combine the electricity, hydrogen and heat sectors intelligently. The future of our economy, our prosperity and the preservation of the environment will depend on its success."

Christian Kullmann, Chairman of the Executive Board of Evonik Industries AG: "Green hydrogen will continue to be in short supply for years to come. We must therefore set priorities and use it where we can achieve the greatest climate protection effect. So far, everyone is just optimizing their own area of activity. With cross-sectoral cooperation, we will create synergies and reduce the overall demand for green electricity and green energy sources. An efficient allocation of resources can only be achieved by working together."

Prof. Dr. Robert Schlögl, founding Director at the Max Planck Institute for Chemical Energy Conversion: "A key challenge for climate neutrality in industry is the rapid conversion of established fossil value chains to new resources and energy sources such as hydrogen and renewables. However, this progress is fundamentally determined by the limited access to these resources. Overarching coordination will greatly accelerate the overall transformation to green products, make it more plannable for everyone, and most importantly, efficient."

Markus Krebber, CEO of RWE AG: "There is no alternative to green power and hydrogen for the decarbonization of many industries. We in the Ruhr region are best placed to become pioneers: Strong companies, well trained and motivated employees and now also a strong partnership. RWE is contributing its entire expertise in this area. If we work together to keep the pace up, we can make the region a winner."

Prof. Dr. Dr. h. c. Christoph M. Schmidt, President of RWI – Leibniz Institute for Economic Research: "The Ruhr region is particularly suitable as a model region because all the sectors relevant to the green transformation are present here, close together and in many cases operate with one another. For a successful transformation, it is not enough for each individual to optimize their processes. Rather, the transformation must be thought out systemically and designed in a coordinated manner. Scientific expertise can contribute to this."

Martina Merz, Chair of the Executive Board of thyssenkrupp AG: "The Ruhr region occupies a prominent position in the green transformation. The unique linking of different sectors and industries makes it possible to think and shape all facets of the energy transformation along the entire hydrogen value chain. It is important to understand CO₂-free produced hydrogen as a commodity and to think the transformation through from the end. That is the only way we will be able to develop a suitable infrastructure quickly enough."

Rolf Buch, CEO of Vonovia SE: "The next German government will have the topics of climate protection, hydrogen and renewable energy high on its list of priorities, because the energy transformation can only be successfully shaped with a mix of different energy systems and technologies. Hydrogen will play an important role in this. A major challenge for all those involved lies in the economic and socially compatible integration of hydrogen," explained Rolf Buch, CEO of Vonovia SE. In this context Buch, who is currently also the moderator of the Initiativkreis Ruhr (Ruhr Initiative Group), underlined the innovative strength of the Ruhr region as a business location. "With the hydrogen initiative, we are making an offer to society and government for an accelerated introduction and use of hydrogen. This strong and proud region could become a pioneer in the decarbonization of industry and thus make a decisive contribution to climate protection. The fact that different sectors and industries are linked together is unique and makes a holistic energy transformation possible. The Ruhr could provide an impetus for the whole country."

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