

Press release

Green hydrogen and decarbonisation solutions: Shell and RWE want to drive energy transition forward

- **Memorandum of Understanding signed: covers production, use and distribution of H₂**
- **Options to be explored in Germany, the Netherlands and the UK**
- **Joint decarbonisation projects to be explored for RWE power plants**

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Shell New Energies NL BV (Shell) and RWE Generation SE (RWE) intend to jointly advance ambitious projects for the production, use and distribution of green hydrogen as well as further options to decarbonise RWE gas and biomass-fired power plants in northwest Europe. A Memorandum of Understanding (MoU) was recently signed by Markus Krebber, CEO of RWE AG, and Wael Sawan, Director of Integrated Gas, Renewables and Energy Solutions at Royal Dutch Shell plc, at the Shell Energy and Chemicals Park Rheinland near Cologne. The aim of the MoU is to identify concrete project options which could then be developed toward investment decisions.

Hydrogen is crucial for the decarbonisation of industry and achieving climate neutrality in large-scale production and processing. Many companies can only achieve their climate goals through the use of hydrogen produced without CO₂ emissions. Accordingly, the demand for green and blue hydrogen is increasing, and the two companies want to focus their cooperation on this potential.

RWE and Shell already have a background of positive cooperation through the pioneering projects NorthH2 in the Netherlands and AquaVentus in Germany. In a next step, integrated projects for the production of green hydrogen, using offshore wind power on a gigawatt scale, will also be examined in the industrial regions in the north-east of England (such as, Teesside and/or Humberside). RWE and Shell intend to jointly assess the future development of electrolysis plants to produce green hydrogen and consider locations which have potential pipeline capacity for hydrogen yet are currently difficult to connect to the electric grid. RWE and Shell want to investigate whether, and how, green energy can be transported from such locations to customers via hydrogen pipelines.

RWE and Shell also want to develop new green hydrogen solutions for industrial customers, focused on the Shell Energy & Chemicals Park Rheinland in Germany, Shell sites in Rotterdam and Moerdijk in the Netherlands, and on customers in their immediate vicinity.

In addition, RWE and Shell intend to evaluate the possible application of green hydrogen in the mobility sector in Germany, the Netherlands, and the UK. A starting point for this could be, for example, the hydrogen station network for heavy trucks which Shell plans to build between Rotterdam, Cologne and Hamburg by 2024.

In the MoU, the two companies also agreed to examine technical alternatives for the decarbonisation of RWE's gas and biomass power plants, such as the possibility of capturing and storing CO₂. The companies will also examine the use of blue hydrogen in RWE's gas-fired power plants in Pembroke (Wales), Emsland (Germany) and Moerdijk (the Netherlands), among others. If progressed, Shell would produce and supply the hydrogen as well as capture and store the CO₂. The results of the trial could be transferred later to other RWE sites, in parallel with the developing transport infrastructure for hydrogen and CO₂.

"We are delighted about this agreement with RWE. Both companies are of the opinion that progress towards net-zero emissions needs government policy to support the energy transition and our customers' needs for low-carbon energy solutions," said Wael Sawan, Director of Integrated Gas, Renewables and Energy Solutions at Royal Dutch Shell plc. "It makes sense for us to evaluate the potential of joint decarbonisation projects and make the best of the global energy experience both companies bring to the table."

"Effective climate action needs cross-sector and cross-national cooperation. In our cooperation with Shell, we want to develop solutions that combine new approaches with proven technologies and, above all, can be applied quickly and on a large scale. We will also contribute our special expertise in the development of offshore wind projects as well as the provision of energy in the form of electricity, heat and, in the future, green hydrogen for our customers," emphasised Markus Krebber, CEO of RWE.

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Photo

After signing the MoU in Wessling, the partners visited Shell's recently installed RefHyne electrolyser. Pictured: (left) Markus Krebber, CEO of RWE AG, (right) Wael Sawan, Shell Director of Integrated Gas, Renewables and Energy Solutions. (Picture: Shell)

RWE AG

RWE is one of the world's leading renewable energy companies. It has capacity of around 11 gigawatts based on renewable energy, including hydropower and biomass as well as a highly efficient gas fleet and an international energy trading business. RWE wants to expand this position by investing in onshore and offshore windpower, photovoltaics and storage technologies. As a driver of the energy transition, the company also focusses on innovative projects such as floating offshore as well as the generation and use



Renewables & Energy Solutions

of hydrogen. At the same time, RWE is responsibly phasing out nuclear energy and coal. Government-mandated phaseout roadmaps have been defined for both of these energy sources. The company has a total of around 41 gigawatts of generating capacity in its portfolio and employs around 20,000 people worldwide. RWE has a clear ambition: to be carbon-neutral by 2040. On its way there, the company has set itself ambitious targets for all activities that cause greenhouse gas emissions. The renowned Science Based Targets initiative has scientifically confirmed that these emission reduction targets are in line with the Paris Agreement.

Shell

Shell's Renewables & Energy Solutions business was created in 2016 and leads the development and growth of Shell's integrated power business, including low-carbon sources like wind and solar, new mobility options like electric vehicle charging, and lower-carbon fuel options, like hydrogen, for industry and road transport. www.shell.com/res

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