Green hydrogen: one of the three key pillars of VERBUND's strategy

VERBUND generates around 98% of its electricity from renewable energy sources, mainly hydropower, supplemented by wind and photovoltaics. The company operates in 12 countries and generated EBITDA of around €4,490 million in 2023 with around 3,800 employees. With a market capitalisation of almost EUR 30 billion, VERBUND is the most valuable company on the Vienna Stock Exchange.

The 3 pillars of the VERBUND strategy

1. Strengthening the home market
Focus on Austria and Germany as key markets with the expansion of renewable energies, e-mobility and flexibility in B2B and B2C.

2. Expansion of renewable energies in Europe
Utilisation of existing resources and development of new projects to reduce dependence on fossil fuels.

3. establishment as a hydrogen player
Development of a green hydrogen economy through local projects and strategic partnerships in target markets..

At a glance

- leading Austrian energy company
- 98% generation from renewable energies
- 130 hydropower plants > 8,400 MW
- 900 km high-pressure natural gas pipeline network
- Market capitalisation: > EUR 29 billion
- 3,400 km national power grid
- Up to 1/4 of total generation from solar and wind power by 2030

VERBUND has built up a broad portfolio of renewable energy sources. VERBUND Green Hydrogen GmbH was founded in 2023 and specialises in three main areas:

Business development
Development and initiation of local and international production projects and building customer relationships

Asset Development & Operations
Technical development, construction and operation of hydrogen projects.

Business Steering & Marketing:
Strategic alignment and management of hydrogen activities, including market analysis and communication.

The team has extensive expertise in these areas and actively drives forward the strategic goals.

Contact
VERBUND Green Hydrogen GmbH
Am Hof 6a, 1010 Vienna
T +43 (0)50 313-0
E hydrogen@verbund.com

Verbund
Our own power.

Green Hydrogen

Sustainable energy solutions with green hydrogen

VERBUND as a decarbonisation partner European hydrogen player

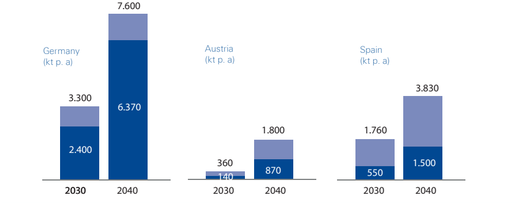
VERBUND is building up a diversified project portfolio consisting of local H2 production plants in Austria, Germany and Spain as well as international projects for importing green hydrogen into our core markets.

Green hydrogen is seen as a game changer for the energy transition. Especially in economic sectors that cannot be electrified, it enables decarbonisation and the avoidance of CO2 emissions. By 2040, it will cover a significant proportion of final energy demand, particularly in energy-intensive industries such as steel, fertilisers and heavy transport.

VERBUND is prioritising the development of an extensive and diversified project portfolio in order to meet the rapidly increasing demand for hydrogen in a sustainable manner. In the short term, we are concentrating on local hydrogen production for decarbonisation in our core countries. To this end, we are developing partnership-based projects that guarantee the immediate and reliable availability of green hydrogen.

In the long term, however, it will not be possible to meet the growing demand through local production alone. We are therefore actively working on large-scale projects in European countries and neighbouring regions to import large quantities of green hydrogen.

Hydrogen demand in the VERBUND core countries



We focus on local production...

Green Ammonia Linz - Fertiliser

- 60 MW electrolyser at the Linz Chemical Park
- Production of up to 7,000 tonnes of H2 p.a.
- IPCEI, Hy2Use and Innovation Fund funding approval received
- Production of fertilisers, melamine and technical nitrogen products
- Utilisation of the by-products O2 (in nitric acid production) and waste heat
- Annual savings of up to 90,000 tonnes of CO2 emissions

H2Future - steel industry

- 6 MW electrolyser from Siemens
- Hydrogen production of up to 1,000 tonnes per year for steel production and control energy services
- Industrial integration of hydrogen production into the steel production process (coke oven gas network)
- Further development into a filling plant and commercial distribution by 2025
- High-pressure trailer filling up to 500 bar 5.0 Quality (fuel cells)

Pannonian Green Hydrogen

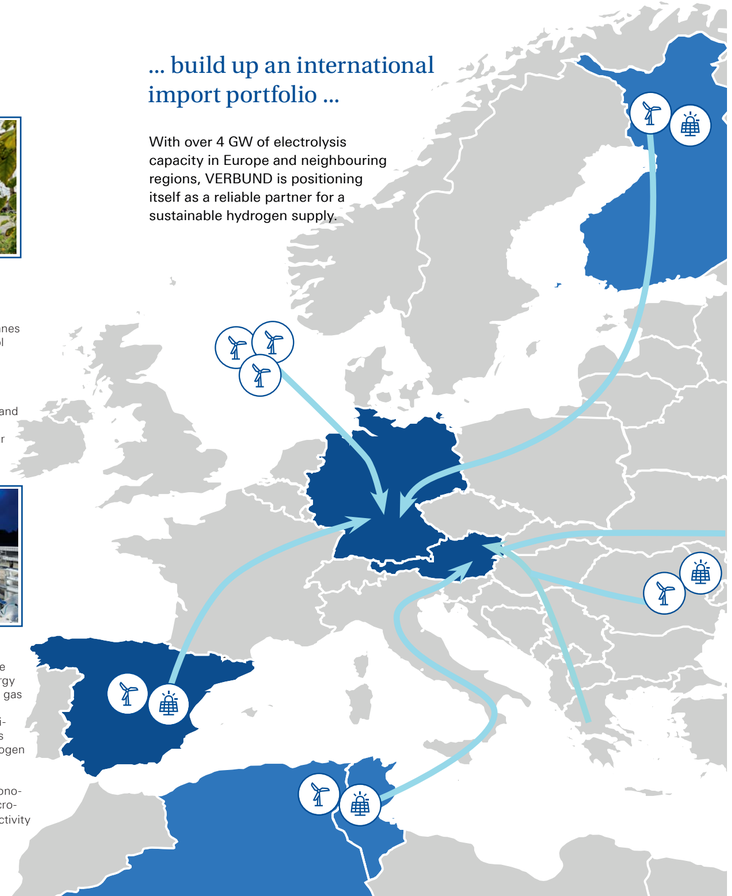
- 60-300 MW electrolyser
- First expansion stage: Production of up to 9,000 tonnes of hydrogen per year
- Final expansion: production of up to 40,000 tonnes of hydrogen per year
- Production of green hydrogen with newly generated wind and solar energy
- Delivery to customers in the eastern region of Austria

Underground Sun Storage

- Development of safe, seasonal and large large-volume storage of renewable energy in the form of hydrogen in underground gas reservoirs.
- Investigation of the hydrogen compatibility of underground gas storage facilities and development of a new type of hydrogen purification technology
- Accompanying technical-scientific investigations in the areas of energy economy, use in industrial processes, and microbial activity. processes, and microbial activity

... build up an international import portfolio ...

With over 4 GW of electrolysis capacity in Europe and neighbouring regions, VERBUND is positioning itself as a reliable partner for a sustainable hydrogen supply.



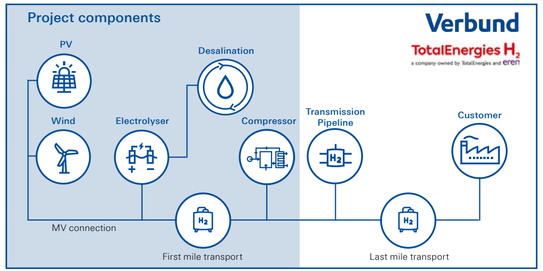
*Import projects: Project developments and activities in other countries under evaluation.

... and develop large-scale import import projects.

The H2 NOTOS project, a co-operation between VERBUND and TEH2, is a central component of VERBUND's import portfolio.

We are using the excellent wind and solar energy potential in Tunisia to feed GW-scale electrolysers and produce around 200,000 tonnes of green hydrogen per year in an initial phase.

The electrolysers will be supplied with water via desalination plants to avoid dependence on natural water sources. The hydrogen produced will be imported from North Africa to our core markets of Austria and Germany via the SoutH2Corridor pipeline connection. Hydrogen production can be expanded to up to one million tonnes per year. The project is therefore of enormous importance for the European energy transition.



Diversified import portfolio

We are also developing projects in Scandinavia, Spain, Tunisia and Algeria as part of the extensive import portfolio that VERBUND is building up in Europe and neighbouring regions.

We are cooperating with leading partners and liaising closely with the relevant infrastructure operators, for example with Masdar and Enagás Renovable for project developments in Spain or with Sonatrach, VNG, SNAM and SeaCorridor for the import of hydrogen from Algeria.

Hydrogen initiatives: Common interests, common successes

The hydrogen economy is decisively promoted through cooperation. Import alliances are developing clear roadmaps for the development of import corridors in order to meet the increasing demand for hydrogen and support decarbonisation.

Hydrogen Import Alliance Austria
The HIAA, initiated by VERBUND and ÖBAG, comprises eight leading companies from Austria and thus covers the entire hydrogen value chain. The HIAA is focussing on the import of green hydrogen to Austria in order to achieve the climate targets and secure the industrial location in the long term. Substantial quantities of green hydrogen are to be imported via pipelines by 2030.

Hydrogen Import Alliance Bavaria
The HIBB consists of six companies that are jointly developing a strategy for importing hydrogen to Bavaria. From 2030, hydrogen should be available in sufficient quantities and on a sustainable basis, especially for Bavarian industry.

These alliances are essential in order to obtain a holistic perspective on the interdependencies along the value chain and to develop concrete solutions for the ramp-up of the hydrogen economy.

Our common goals are clear

- Accelerating the H2 economy
- Coordination of production, transport and use
- Solving the 'chicken and egg problem'
- Sharing expertise and resources
- Developing concrete solution proposals for relevant stakeholders and political decision-makers