



# HYDROGEN VALUE CHAIN SUITE

Delivering insights at the leading  
edge of market development

**FICHTNER**

# The Fichtner Hydrogen Value Chain Suite (H2VCS)

With its portfolio, Fichtner acts as an independent engineering and consulting provider at the leading edge of market development, processing know-how and data that only very few market participants have. With a team of energy economists, engineers and consultants, our internal expertise enables us to develop practical and sustainable solutions for companies and policymakers. In order to serve our wide range of clients and provide solutions to their specific needs, Fichtner has developed H2VCS, which leverages our long-term experience within the market, both from engineering and consultancy perspectives.

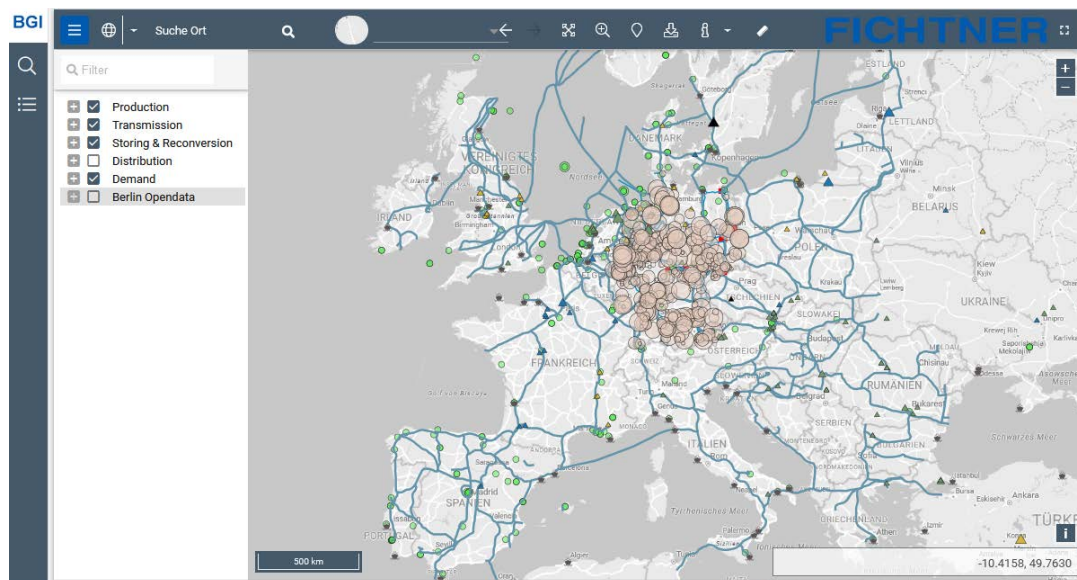
## We offer a global market model suite for hydrogen and its derivatives

Fichtner gives decision-takers a comprehensive understanding of technologies, resources, and their costs, as well as market and regulatory developments along the entire hydrogen value chain from production to transport and delivery to customers. Among others, we advise our clients on the following questions:

- What are suitable production sites in terms of their renewable energy potential, resources, and infrastructure availability?
- What are realistic costs and their distribution from the point of production to the end consumer?
- What are expected supply and demand volumes across different regions and sectors?

- What is the market value of green hydrogen and its derivatives to customers in different markets?
- At what time and price will hydrogen and/or one of its derivatives be available at a specific location?
- Which international and national policies under development are relevant? Which specific regulatory and certification requirements need to be complied with?

The suite, along with its in-house developed tools and underlying datasets, presents the latest technological, market and regulatory environment and developments for hydrogen and its derivatives including ammonia, methanol and synthetic fuels.



Analysis and visualization within Fichtner Business Geo Intelligence (BGI)

## Fichtner Business Geo Intelligence (BGI)

For visualization and analytics, we offer an interactive web-based solution portfolio Fichtner Digital Grid (FDG) based on our Business Geo Intelligence (BGI) framework. BGI enables the management and handling of projects in a more agile and efficient manner.

This solution was developed by Fichtner and is successfully implemented by top-tier clients. BGI can be used on desktops, tablets and smartphones, and can be launched directly through a web browser. BGI can be flexibly integrated into SAP, CRM, SharePoint, and various database systems.



## State-of-the-art modeling and global data coverage

Our experience from a wide range of projects as well as the use of open-source tools and open data sources are bundled into one fundamental hydrogen market model.

Among others, this allows for global coverage and specific assessment with respect to the following:

- Availability of major resources such as water, renewable energy, and CO<sub>2</sub> as well as infrastructure (e.g. terminals, shipping, transmission and distribution infrastructure)
- Development and status of upstream, midstream and downstream projects
- Modeling of supply availability, transport and storage capacities, as well as offtake volumes
- Analysis of the levelized cost of production, transport and storage

- Offtake assessments including identification of offtakers, volumes, and willingness to pay (WTP)
- Reference prices and price discovery support
- Regulatory and certification requirements

Utilizing georeferenced data that encompasses every stage of the value chain, such as renewable electricity, hydrogen production, processing, transmission, storage, reconversion, distribution, and end use, we provide detailed models of potential hydrogen value chains from the point of production to the end consumer.

These can be optimized in terms of technical, economic, market and regulatory aspects using our integrated product suite and evaluated by our pool of experts.

The Fichtner Hydrogen Value Chain Suite is aimed at clients from the private and public sector for use in cases such as the following:

- Concept, market and feasibility studies
- Asset evaluation and due diligence reviews
- Assessments of strategic investment opportunities
- Analysis of strategic aspects of project and market developments
- Portfolio optimization
- Provision of cost assumptions of different technologies
- Netback and cost-plus pricing, Contract for Differences (CfD)
- Economic and financial models for investors, banks and state institutions
- Sales and purchase agreements (SPA) / long-term supply contracts
- Digital Twin development for project developers' and owners' portfolios

# FICHTNER

Fichtner is one of the leading independent engineering and consultancy firms for infrastructure projects. With its home office in Stuttgart, Germany, and its subsidiaries, affiliated companies, branches and project offices throughout the world, the Fichtner Group can call on a global network of experienced experts for planning and executing projects in the fields of energy, water, environment, transportation and IT. Fichtner's focus is on providing independent consultancy to develop bespoke solutions that best meet the needs of its clients.

Fichtner GmbH & Co. KG  
Sarweystrasse 3  
70191 Stuttgart  
Germany

Phone: +49 711 8995-0  
Fax: +49 711 8995-459  
info@fichtner.de  
www.fichtner.de

