



Market Report

A Snapshot of your Market Sector

Hydrogen

Cost of Doing Business Support

For information on **reducing the cost of running your business**, the [Find Business Support](#) website has links to advice, funding and regional support.

This pack has been designed to provide information on setting up a business in the **Hydrogen** industry in Scotland, as well as helping to inform the market research section of your business plan. You can find more information on how to write a business plan from the Business Gateway website (www.bgateway.com/businessplan), including an interactive template and tips to get you started.

This market report was updated by Business Gateway in **December 2022**. If you find the information contained in this document useful, tell us about it! Send us feedback [here](#); we will use your comments to help improve our service.

What do I need to know about the Hydrogen market?

The following summary statistics have been taken from market research reports and reliable resources that the Information Service uses to compile industry information. They should give you an indication of how your industry is faring at present and whether there is demand for your type of business:

- ◆ Hydrogen is an emerging technology that is expected **to play a key role in achieving net-zero carbon emissions by 2050**. In addition to being able to replace most uses of natural gas in the energy mix, hydrogen's production via electrolysis and its ability to be stored over long time periods can help to overcome the challenges that come with increased intermittent renewable generation in the electricity system. (Mintel, *Renewable Energy - UK*, October 2022).
- ◆ The global hydrogen generation market was valued at **\$135.8 billion in 2020** and is estimated to grow to **\$174.51 billion in 2025**. (Technavio, *Global Hydrogen Generation Market 2021-2025*).
- ◆ The global hydrogen storage market was valued at **\$12.3 billion in 2021** and is estimated to grow to **\$16 billion in 2026**. (Technavio, *Global Hydrogen Storage Market 2022-2026*).
- ◆ The global fuel cell vehicle market was valued at **9,342 units in 2020** and is estimated to grow to **186,129 units in 2025**. This represents significant growth opportunities for vendors. Passenger cars contributed **71.42% or 6,672 units** to the overall market in **2020** and will grow to **75.44% or 140,414 units in 2025**. Commercial vehicles contributed **28.58% or 2,670 units** to the overall market in **2020** and will **decrease to 24.56% or 45,715 units in 2025**. (Technavio, *Global Fuel Cell Vehicle Market 2021-2025*).
- ◆ Low-carbon hydrogen has seen increasing growth within the last few years, as it is seen as a way to cut emissions across the industrial and transport sectors. To date, the total active and pipeline capacity of low carbon hydrogen is over **59 mtpa**, of which **85% and 15%** comes from to green and blue plants, respectively, with 0.2% from purple and turquoise combined. Europe, Russia and Australia are the leaders in the development of low-carbon hydrogen. With increasing political and financial support aligned with regional hydrogen programmes, it will be likely that capacity will hit the high case scenario, with **over 36 mtpa of capacity by 2030**. (Global Data, *Global Power Mix in Transition 2021 – 2035 Outlook*, September 2022)
- ◆ The analysis, based on a broad range of production scenarios, indicates that a strong hydrogen sector in Scotland could support up to **300,000** new or secured jobs across all skill levels by **2045**. Many of the skills required already exist in various sectors, including our renewable and offshore industries. (Scottish Government, *Hydrogen action plan*, December 2022) (<https://tinyurl.com/2s3p9348>).
- ◆ Industry bodies for the hydrogen industry include [Hydrogen UK](#), [Hydrogen Council](#) and the [Scottish Hydrogen and Fuel Cell Association](#).



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Where can I find more information on my market?

The Information Service has access to a number of databases which can offer more detail on this industry. Some of these reports are listed below - if you would like to be sent extracts from any of these reports, please contact us on **0300 013 4753** or email info@bgateway.com.

- ◆ **Mintel – Renewable Energy - UK** (October 2022). The government has established a £240m Net Zero Hydrogen Fund which aims to support the commercial deployment of new low-carbon hydrogen production projects during the 2020s. It will fund the development and deployment of new low-carbon hydrogen production to de-risk investment and reduce lifetime costs. In July 2022, the BEIS outlined the specifics of how it would go about supporting hydrogen development, committing to awarding up to 1GW of contracts to electrolytic (i.e. green hydrogen) projects in two allocation rounds in 2023 and 2024. These contracts will be awarded under the Hydrogen Business Model (HBM), which will see ongoing revenue support back the development of low-carbon hydrogen. The first allocation round, which is held jointly with the Net Zero Hydrogen Fund, is expected to support at least 250MW of green hydrogen.
- ◆ **Technavio – Global Hydrogen Generation Market 2021-2025**. The growth of the hydrogen generation market in Europe will be driven by the increasing investments in industries such as chemical, fertilizer, refinery, glass, semiconductor, metal processing, and food. Europe is a key market for fuel cell vehicles owing to the high consumption of fuel cell light-duty vehicles, material handling equipment (MHE), and fuel cell buses in the region.
- ◆ **Mintel – Airlines – UK** (October 2022). Longer-term ambitions include the production of up to 10GW hydrogen by 2030, with at least half of this from electrolytic hydrogen. From 2033, the aviation market will be included in the government's legally binding carbon budgets, which place a restriction on the amount of greenhouse gases the UK is allowed to emit over a five-year period. Elsewhere, Airbus aims to bring a zero-emission commercial aircraft to the market by 2035, using a hydrogen-combustion propulsion system. Various airlines are collaborating with the company to help achieve this target.

There are also a number of online resources you may find helpful:

- ◆ **Scottish Industry Directories – Green Hydrogen** (greenhydrogen.directories.scot). A directory of green Hydrogen supply chain companies in Scotland
- ◆ **International Energy Agency (IEA) – Hydrogen** (www.iea.org/fuels-and-technologies/hydrogen). A collection of resources on global activity around hydrogen.
- ◆ **Scottish Power's** article "*Scotland Set to Support Green Hydrogen Revolution in Germany*" (June 2022) (<https://tinyurl.com/3v5v5xd2>).

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How can I find out about my competitors?

Business Gateway's online guide to [Competitor Analysis](#) explains how to find your competitors, how to research what they're doing and how to act on what you learn about them.

Immediate competition will be from other businesses in your local area. There are several online directories which can be used to find company information and generate lists easily and at no expense. Many Local Authorities also publish local business directories on the web. Below are some key web resources:

- ◆ General business directories such as [Yell](#) ,[Thomson Local](#) or [Google Maps](#)
- ◆ Trade specialists like [EuroPages](#) (European directory), [The Wholesaler](#) or [Free Index](#)
- ◆ Business to business (B2B) specialists such as [Kompass](#)

Likewise, your local Chamber of Commerce may publish a members' directory; find your local Chamber on the [Scottish Chambers](#) website.

Once you've identified who your competitors are, the next step is to gather information on the way they do business. Which services do they provide? How do they market themselves? How much do they charge?

To learn about your competitors:

- ◆ Look for articles or adverts in local newspapers, trade press and directories.
- ◆ Try to read their marketing material; if the company has an online presence, visit the company's website as a first port of call. Not only does it give you a better understanding of the company's activities, it can also offer a wealth of information such as a company history or staff biographies, as well as the company's partners or suppliers
- ◆ Search for information on limited UK companies via the [Companies House](#) website
- ◆ Gain an insight into your competitor's performance using credit checks and the accounts that limited companies are required to submit to Companies House each year.

We can provide credit checks free of charge; if you are interested in using this resource, or looking for us to help you find relevant publications, please contact us by emailing info@bgateway.com or by calling **0300 013 4753**

What about suppliers?

[Choosing and Managing Suppliers](#) can help you decide what you need from a supplier, how to identify one and how to choose one to deal with.

Trade associations or industry specific organisations may also be able to recommend suppliers or contacts. You can also use the aforementioned resources for finding competitors to find suppliers.

Once you have decided on a supplier, we can run a credit check on the company to help assess their financial stability. We provide credit checks free of charge; if you are interested in using the resource please info@bgateway.com or by calling **0300 013 4753**.

Who are my customers?

Your business plan should include information about the customers you would expect. Business Gateway's guides on [Market and customer research](#) will help you to identify new trends, opportunities, customers and competitors.

It can be useful to group your customers by geographical location, age or lifestyle. The websites listed below are freely available and can provide most of this information. If you can't find what you're looking for from these website, please contact us and one of the team will be happy to help:

- ◆ Access the latest population estimates from the [National Records of Scotland \(NRS\)](#). NRS also offers demographic factsheets for each council area in Scotland, which can provide summary statistics for the area you will be based in.
- ◆ Information from the most recent census in 2011 is released via the official website. See in particular the [Census Area Profiles](#). Clicking on your area of interest will give the latest population figures, including estimates by age.
- ◆ [Understanding Scottish Places](#) has interactive profiles of towns and cities across Scotland. It can be useful for understanding the interrelationships and flows between towns, and also gives comparisons between two or more places.
- ◆ [Scottish Government Statistics](#) provide accurate and up-to-date statistics on Scotland, covering population, health, education and housing.
- ◆ [The Scottish Household Survey](#) provides information on the structure, characteristics, attitudes and behaviour of Scottish households, both at a national and local level.
- ◆ [Office for National Statistics \(ONS\)](#) is the recognised national statistical body for the UK. ONS covers a wide range of demographic, economic and social issues at a UK level.

How can you help me with other aspects of starting my business?

The Business Gateway website has guides, videos, online tutorials and tips on all aspects of starting up a business in Scotland. Follow the links below to explore each resource:

Accountancy

Institute of Chartered Accountants of Scotland's (ICAS) "[Find a Chartered Accountant](#)" tool

Funding

[Practical information](#) on finance and funding for starting and growing your business

Insurance

[Business insurance guide](#)

Legal Help

Gov.uk "[Licence Finder](#)" tool

Law Society of Scotland's "[Find a Solicitor](#)" tool

Pricing

Business Companion [Pricing & payment guide](#).

Please note: the most effective way to research pricing is to conduct your own research – visit wholesalers or suppliers to obtain price lists, find quotes from similar companies and work out what other businesses in your area are charging

Promotion

[BG guides to Marketing](#)

Training

[Skills Development Scotland's My World of Work](#)

[Funding for training](#)

[Small Business Bonus Scheme \(Scotland\)](#)

Your local Business Gateway can offer events, workshops and 1:2:1 support on all aspects of starting and developing your business. Call the helpline on **0300 013 4753** to find out what is available in your area.

We hope you find this Market Report useful and we'd love to hear your feedback [here](#).

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