



SECTOR PROFILE

GREEN HYDROGEN

Introducing **Namibia**

Namibia is ranked amongst the world's most politically stable countries. The Namibian Government is committed to stimulating economic growth and employment through the attraction and retention of investments.

Namibia's primary infrastructure is well-developed and modern, with a good transport system whose road infrastructure quality is ranked the best in Africa, an efficient communication system with global cellular networks and globally competitive broadband, as well as a sophisticated financial sector.

A land of contrasting beauty, Namibia is strategically located on the south-western coast of Africa and serves as a quintessential trade conduit with the rest of the world for landlocked countries including Botswana, Zambia, Zimbabwe and the Democratic Republic of Congo through the port of Walvis Bay. Compared to other ports in the region, the congestion-free port of Walvis Bay offers shipping line time savings of up to five days to Europe and the Americas, and is a springboard into the Southern African Development Community (SADC) trade block, with a market access of 330 million people.

The country is endowed with natural wind and sun resources, and is considered to be amongst the most competitive destinations in the world with potential to become a producer and exporter of green hydrogen, reckoned to catalyse the decarbonisation of the planet.

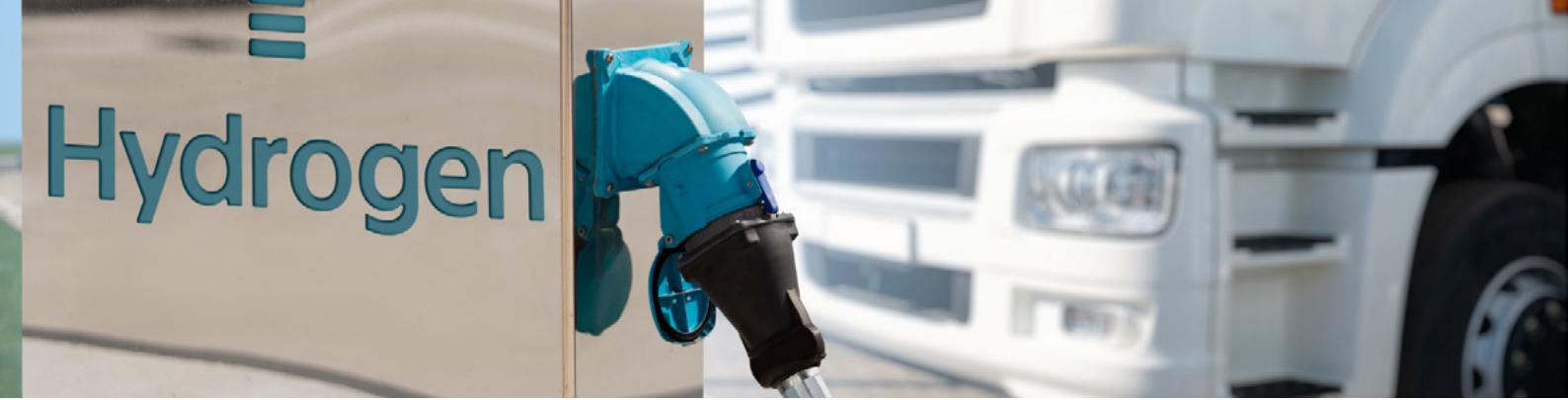
Namibia is a middle-income country whose considerable successes rest on a stable multiparty parliamentary democracy that delivers sound economic management, good governance, fundamental civic freedoms and respect for human rights.

Namibia values long-term relationships with foreign investors, and provides numerous opportunities for international investors seeking a foothold and growth on the African continent. The Government has put in place an enabling environment to assist with identification of opportunities, syndicate financing, operating and tax incentives in certain sectors, particularly manufacturing, and one-stop bureau services for establishment of local operations of international companies.

The Namibia Investment Promotion and Development Board (NIPDB) serves as a one-stop shop for all companies aspiring to do business in Namibia. As a public entity in the Office of the President, the NIPDB exists to facilitate investments into Namibia.

This brochure presents the Namibian sectors which are abundantly filled with development opportunities awaiting investment. The areas of green hydrogen, renewable energy, oil and gas, chemical industry, sustainable tourism, transport and logistics and value addition opportunities in the mining sector.





Hydrogen

Sector Profile

Green Hydrogen

Overview of the Green Hydrogen industry and significance to the Namibian economy

Due to its abundant sun, wind and vast open land, Namibia has a renewable energy production capacity of >250GW. This capacity is competitive on a global scale, making Namibia a leading low-cost green hydrogen producer and exporter at 1.5 USD/kg. This phenomenal advantage makes the Southern Development Corridor Initiative (SDCI) in the south-western part of Namibia the prime location for 10-15 Mt/pa (or \$35 billion) green hydrogen based exports. The country has significant potential to produce cost effective electricity from green hydrogen, that could boost both local and regional energy supply. This meaningfully contributes to the global agenda of decarbonising the earth.

The cost of electricity is the number one determinant of the cost of green hydrogen, of which the cost of the electrolysis is the other critical variable. Namibia is primed to become a key producer and supplier of green ammonia and can be competitive in the green ammonia market. The pricing is expected to decline over time as solar, wind and electrolyser production costs decrease.

Namibia is building its first large-scale vertically integrated green hydrogen plant. The project is planned to have a cost of US\$9.4 billion and will employ 3,000 people with 15,000 construction jobs necessary for the four-year build. Namibia has already engaged its first investor, awarding Hyphen Energy preferred bidder status for US\$4.4 billion (the fDi Report 2022, Financial Times).

Investment opportunities in the Green Hydrogen sector

A number of opportunities exist in maximising the value chain upstream and downstream. Upstream opportunities include the manufacture and assembly of wind foundations, blades, turbines and copper cables. It is expected that the majority of equipment will be imported from countries with tech expertise and manufacturing plants, however there may be localisation opportunities to manufacture the wind turbine foundations, blades and racking in Namibia. Downstream opportunities involve the production of synfuel, methanol, fertiliser, green steel, zinc and iron ore.

The Africa Continental Free Trade Agreement (AfCFTA) and other trade agreements could potentially create a larger market for local manufacturing to serve, which would in turn increase capabilities. The green hydrogen plant further offers plenty of export opportunities, as Namibia can export excess electricity to neighbouring countries which have unstable electricity grids. We aim to see Namibia evolve into a net exporter of electricity with the development of this new green hydrogen plant.

Financing opportunities for green projects

To have a sustainable financing strategy that supports the commercialisation and growth of the green hydrogen industry is important. To this effect, Namibia recently launched the SDG One platform. This platform aims to streamline access to development financing, in order to accelerate project development and mitigating certain investor risks.

The platform is envisaged to be hosted under the Environment Investment Fund (EIF) and aims to deploy public, private and philanthropic capital towards power transmission infrastructure, hydrogen pipeline infrastructure and hydrogen-powered locomotives.

How to invest in the Green Hydrogen sector

Investors can participate in the green hydrogen development projects through privately run smaller scale projects. Developers will be required to take full control of all integrated components such as acquiring land and developing the various infrastructure (energy, desalination, transmission pipeline and storage facilities). Key approval, permits and licences are required to enable large scale projects, such as: application of electricity generation licences from the Electricity Control Board (ECB); connection to the transmission and distribution network with Nampower and distributors; environmental clearance from government authorities are key approvals needed. The government of Namibia will also systematically run competitive bidding processes for strategic parcels of land owned by the government where large scale wind and solar generation occurs for the production of green hydrogen.

Shared experience of Domestic and Foreign Investments in Namibia

Participation in the Namibian mining sector is predictable and secure, supported by a very strong political environment and a transparent policy and legislative framework. Following the adjudication process and ratification by the Green Hydrogen Council and Cabinet, Hyphen Hydrogen Energy (Hyphen) was selected as the preferred bidder for the first project in November 2021. Other bidders include local and global players such as: Sasol, Fortescue Future Industries (FFI), CRPG JV Broskies, Tumoneni and Neo Green. A consortium of a local and international firm (O&L and CMB.TECH) will build a hydrogen demonstration hub consisting of a 5MW solar park, 4MW electrolyser and a Hydrogen refuelling station.



Namibia is uniquely placed to become an important role player in the world of decarbonisation through green hydrogen. You are blessed as a country with amazing renewable resources, both in the form of wind and solar, and in terms of the scale of land that is available. Those are really the ingredients you need to make cost-effective hydrogen

~ Marco Raffinetti - HYPHEN Hydrogen Energy Chief Executive, 2022







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