

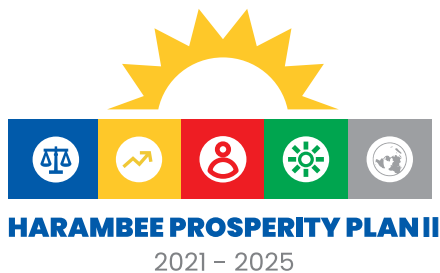


Green Hydrogen | Namibia



#ExportingSunlight

The development of complementary engines of growth through the accumulation of new productive capacities and know-how in strategic sectors is vital to ensure the growing complexity of Namibia's economy. Moreover, the development of such engines is necessary to cushion the Namibian economy from unusual and external risk factors. A preliminary analysis by the World Bank of the green hydrogen market and levelized cost of hydrogen (LCOH) shows that Namibia could produce highly competitive green ammonia.



Executed by

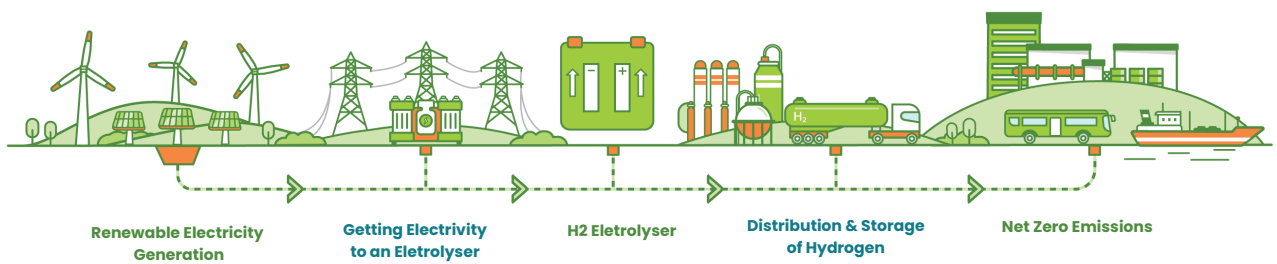


Overview

With its abundant, world-class renewable energy resources and increasing demand for green hydrogen worldwide, Namibia is quickly emerging as an early entrant in this new market and has ambitions of becoming the leading exporter of Green Hydrogen in Africa.

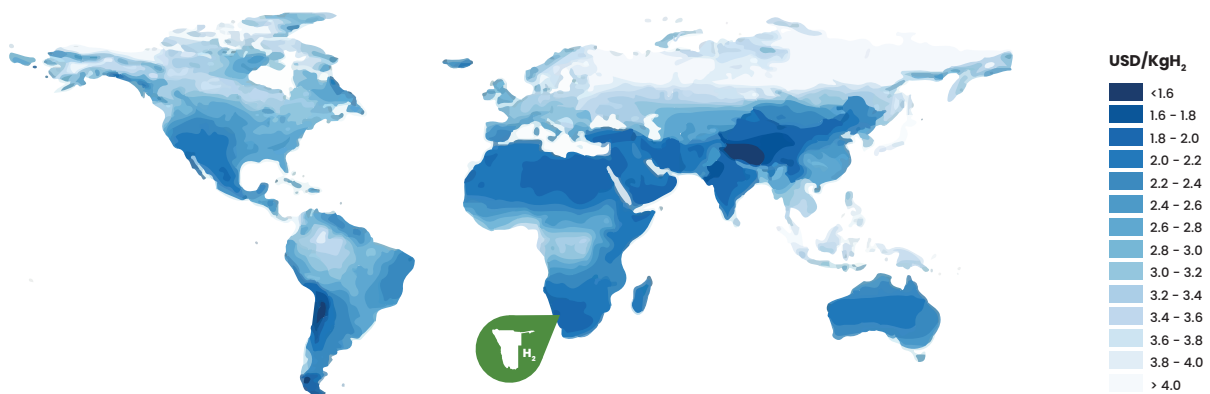


Green Hydrogen Production



The Government of Namibia is focusing efforts on achieving large-scale, low-cost Renewable Energy development and designing models for sustainably maximizing fiscal revenue and local development in Renewable Energy investments and green ammonia production. Namibia's world-class solar and wind resources give it a long-term competitive advantage in producing green hydrogen and green ammonia.

Long term hydrogen production from solar and wind systems



Over the past 6 months, Namibia has achieved the following

Presidential Support: Harambee Prosperity Plan II

Through the recently launched Harambee Prosperity Plan II, a presidential National development plan, and recommendations from Harvard Growth Lab, the Government has adopted and considers the production of hydrogen as a strategic bet.

Government Political Support: Green Hydrogen Council

The Government has established a Green Hydrogen Council (GHC), with representation from:

- a. Cabinet through the Cabinet Committee on Treasury Chair (CCT)
- b. Cabinet Committee on Trade and Economic Development Chair (CCTED),
- c. the Central Bank Governor,
- d. Head of the Namibia Investment Promotion and Development Board (NIPDB)
- e. Presidential Economic Advisor

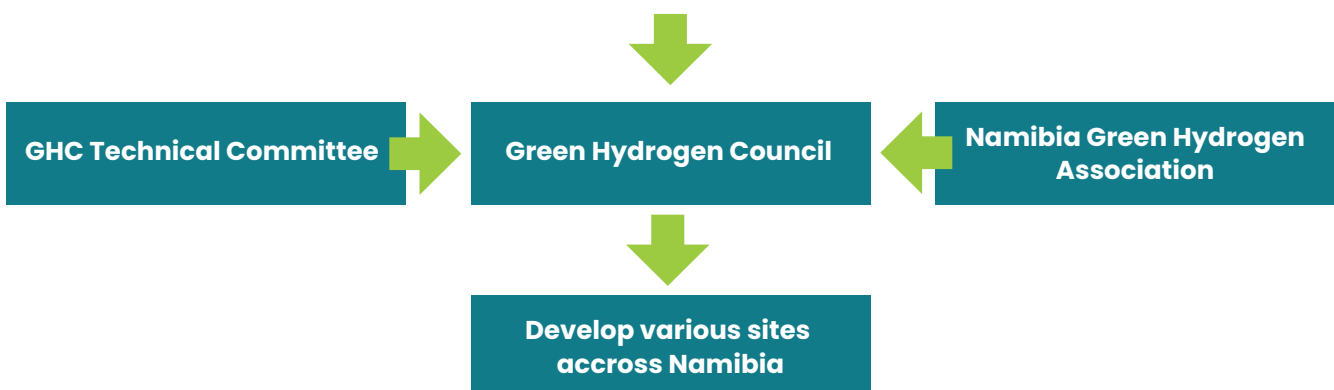
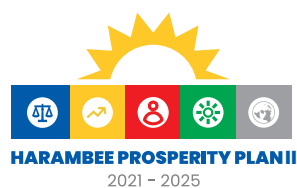
Technical Support: Green Hydrogen Technical Committee

Government has established a Technical Committee to support the Green Hydrogen Council (GHC), with representation from:

- a. NamPower
- b. Ministry of Mines and Energy
- c. Ministry of Agriculture, Water and Land Reform
- d. Ministry of Environment, Forestry and Tourism
- e. Ministry of Works and Transport
- f. Namibia Investment Promotion and Development Board (NIPDB)
- g. Ministry of Finance, PPP Unit
- i. Performance Delivery Unit, The Presidency
- j. Bank of Namibia

Private Sector Support: Namibia Green Hydrogen Association (NGHA)

The private sector has established the Green Hydrogen Association. The aim of the NGHA is to provide a platform for private sector entities to engage with each other as well as with the Government of the Republic of Namibia. The NGHA will act on behalf of its members to deliver the necessary support to the development of green hydrogen and hydro-chemicals as a key component towards a low carbon economy and the diversification of the Namibian export basket. It will provide an authoritative point of contact and a clear, informed and current view on the development and demonstration of priorities for the Government of the Republic of Namibia, other funding agencies and key influencers.





Site 1.

Southern Corridor Development Initiative (Karas Region)

Preliminary market estimates note that at scale the //Kharas Region stands to absorb:



Potential FDI
of US\$6 billion



Produce 2 million
tonnes of Ammonia



Excess of US\$800
million in revenue p.a



Generation
assets of 5GW



Produce power at
less than 0.03 US\$ /kWh

Such an investment would be transformative not only for the Southern Regions of Namibia but for the country as a whole and while the probability of it coming to fruition still requires various feasibility studies to be conducted, the significance of the opportunity warrants a coordinated and focused effort to unlock. The SCDI shall include a portfolio of complementary projects and infrastructure that maximises the opportunity presented by Green Hydrogen and Ammonia for the country which include the deepening & management of the Luderitz Port and supply of excess energy to the SAPP. Above is an indicative layout of the SCDI.

Next Steps

1. Namibia is developing Request for Proposals (RFP) to issue by July 2021 for concessions to develop feasibility reports in the Southern Part of the country.
2. Developers will be awarded these concessions before December 2021 with commitments from government to issue respective permits required to develop comprehensive feasibilities.

Site 2.

Erongo Green Energy Hub (EGEH)

An RFP for the second site in the Erongo Region will be launched soon after the SCDI (the first site). The Erongo Green Energy Hub looks to establish renewable assets, produce green hydrogen & associated synthetic fuels, establish a transition park and bunkering through the Walvis Bay Port using the Public Private Partnership model. Preliminary estimates show that the EGEH can attract over US\$ 2.5 billion in investments, create over 1,000 permanent jobs, produce 1 GW of Solar energy using 800 MW of electrolyzers. The EGEH offers state of the art port infrastructure, jetty for NH₃ loading/unloading, railway infrastructure and easy access to water.



Potential Investments
of US\$2.5 billion



Over 1,000
permanent jobs



Produce 1 GW of
solar energy