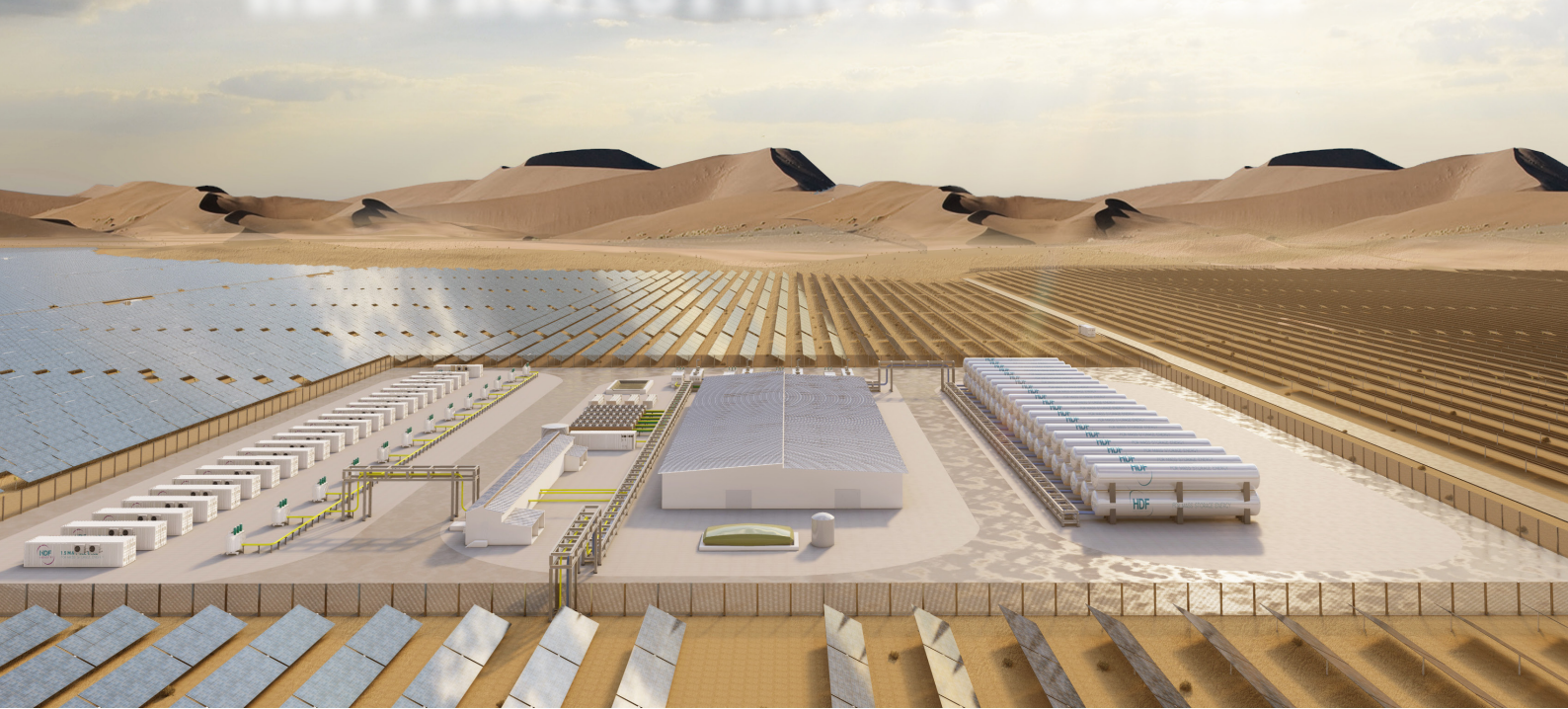




JANUARY-FEBRUARY 2025

HDF PROJECT INCHES CLOSER



**GRN EYES 330 MW
SOLAR PV CAPACITY FOR
IMPLEMENTATION**



**44 MW INNOVENT DIAZ WIND
FARM NEAR LÜDERITZ ON
TRACK**



**N\$42M EU CSO GRANTS TO
SUPPORT INCLUSIVE GREEN
GROWTH**



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Tribute to a Renewable Energy Champion

The Editor and the **Etango** Team joins the rest of the nation and the global village in mourning the passing of a true legend - the Founding Father of independent Namibia.

So much has been said about the late Dr Sam Nujoma, but for us at Etango we will remember him for his passion for renewable energy and having fully supported Namibia's efforts to exploit its abundant solar and wind resources for energy generation.

Dr Nujoma's visionary leadership and commitment paved the way for the country's first solar plant, the 4.5MW Omburu solar power station near Omaruru, which he inaugurated himself a decade ago.

The Founding President believed that energy was a basic need and all humans need to have access to all types of energy. He championed the establishment of a more diversified renewable energy policy, one that emphasises solutions that catalyse income generation. Dr Nujoma championed the adoption of electricity tariffs that ensured that the energy provided to citizens was not only

ecologically sound but also affordable and easy to access.

"If the current energy situation, of the demand that exceeds the supply and use of fossil fuels and traditional biomass, continues then we will have more problems to solve in future. I encourage our government to invest in alternative energy sources, such as solar, wind, and biogas, especially with the aim to use these forms of energy in those parts of our country that cannot be economically connected to the national power grid," Dr Nujoma said when he inaugurated the Omburu solar plant in May 2015.

We salute the Founding Father for having laid a solid foundation for the development of renewable energy technologies in Namibia, which will also facilitate the emerging Green Hydrogen sector and boost Green Industrialisation.

Long Live Tate Sam!

Editor

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GO WELL: The late Founding Father Dr Sam Nujoma and InnoSun Founder Grégoire Verhaeghe during the inauguration of the Omburu Solar Plant in 2015.



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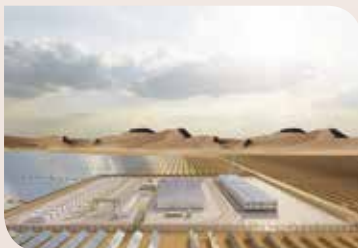
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Contents

Mines and Energy targets 330MW new solar PV capacity	4-5
HDF Energy's N\$4.5 billion project eyes 2026 take off	6-7
Sorex solar plant on course for April commissioning	8
InnoVent's 44 MW Diaz Wind Farm reaches milestone	9
Namibia seeks N\$2.7b from Climate Fund for Green Hydrogen.....	10
N\$42m EU CSO grants to support inclusive green growth	12-13
Change of leadership at Renewable Energy Industry Association	16
Alweendo says Namibia realising its renewables ambition	17
SACREE hosts inaugural SADC Sustainable Energy Week	18
Nopal's Maltahöhe project aims to be Bioenergy trailblazer	19
Namport signs MoU with Portuguese Port of Sines and Algarve	21
Opinion: Who owns Namibia's green future?.....	22-23
Opinion: Hyphen seeks to minimise footprint in national park.....	24-25
SA's energy landscape set for major transformation in 2025	26



Cover picture:

SOLAR-HYDROGEN POWER: Located on a 400-hectare site in Swakopmund, the HDF Energy project will leverage Namibia's abundant solar and wind resources to produce clean, reliable energy. Renewable@ Swakopmund, as the project is called, is expected to generate 142 GWh of green electricity annually, powered by 85 MWp of solar PV capacity and 230 MWh of green hydrogen storage. **Illustration by HDF**

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MME Targets 330MW Solar PV Capacity for Procurement and Implementation

The Ministry of Mines and Energy (MME) has issued a new ministerial wish-list for procuring new power generation projects as Namibia strives towards ensuring an uninterrupted supply of energy at affordable tariffs.

The 2024 Ministerial Determination of Power Generation Projects, which is in line with the National Integrated Resource Plan (NIRP), serves as a strategic guide for the power utility, NamPower, and the broader Electricity Supply Industry (ESI) in the development, procurement and execution of essential energy projects.

Mines and Energy Minister Tom Alweendo said the Ministerial Determination, which introduces a new allocation of 330 megawatts (MW) of solar photovoltaic (PV) capacity for procurement and implementation, underscores the Namibian Government's commitment to improving energy security and advancing energy independence through sustainable power generation. It therefore aims to facilitate the continued growth and diversification of the country's energy sector, with particular focus on renewable energy sources.

The new projects will be divided between NamPower and Independent Power Producers (IPPs). The power generation projects involve the development of six solar PV power plants, each with a capacity of 20MW, assigned to IPPs, through an accelerated procurement process.

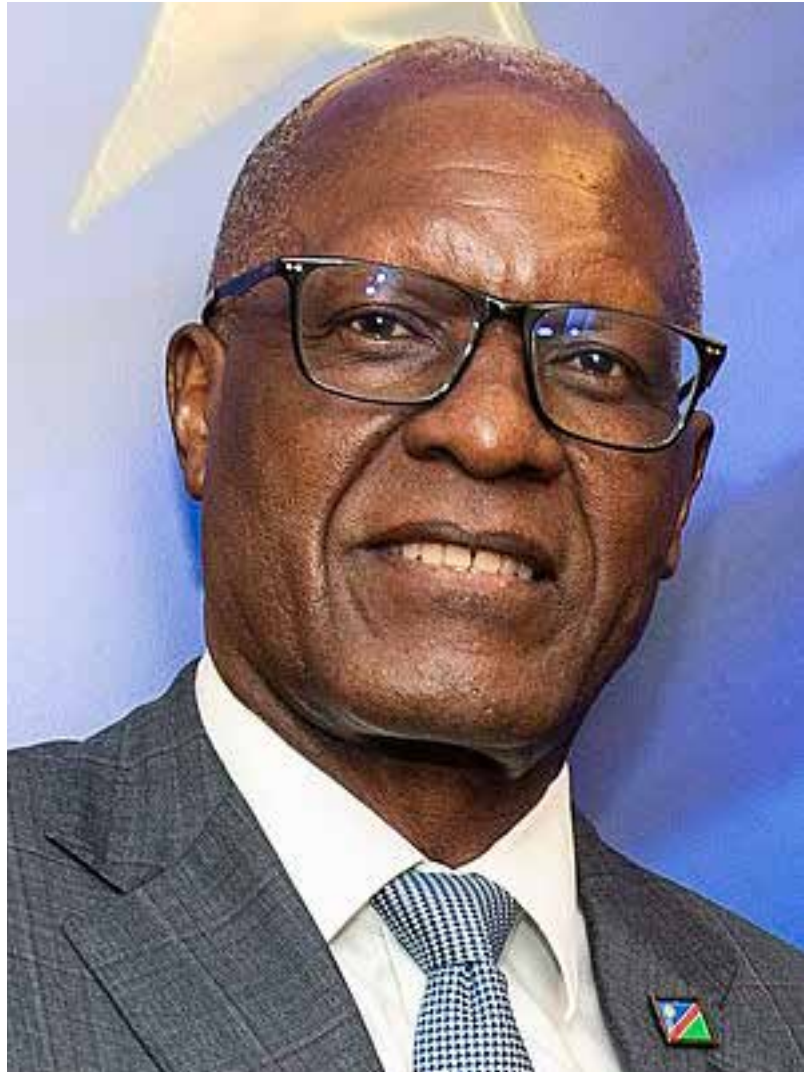
REGIONS TARGETTED

"These projects are strategically earmarked to be constructed in specific regions with limited or no previous generation capacity to foster job creation and ensure local employment during both the construction and operation phases of the power plants, in addition to addressing intermittency grid challenges. The substation has been strategically chosen to minimise transmission integration costs and minimise impacts on overall projects tariff," Alweendo said in the announcement.

The identified regions are Karas, Hardap, Oshikoto, Otjozondjupa, Kavango West, and Zambezi.

NamPower will add another 30MW to the already approved 70MW Rosh Pinah Solar PV Power Plant. This is a proactive step to benefit from the existing development works in an attempt to avoid delays, enhance investment efficiency and reduce dependency on imports faster than starting new projects from scratch.

The utility will also develop and own a new 80MW Omburu Solar PV Power Plant to be built adjacent to the existing Omburu plant in the Erongo region. NamPower will own and operate the new plant which



AMBITIOUS TARGET: Mines and Energy Minister Tom Alweendo



These projects are strategically earmarked to be constructed in specific regions with limited or no previous generation capacity to foster job creation and ensure local employment during both the construction and operation phases of the power plants, in addition to addressing intermittency grid challenges.

will also maximise on local employment creation in the region.

SKORPION REVIVAL

Another proposed project is the 100 MW Skorpion Solar PV Power Plant to assist in the revival of the Skorpion Zinc Mine, which was previously powered by South Africa's Eskom. The plant will facilitate the realisation of significant macro and micro spinoffs as the mine normally employs up to 600 direct and 1000 indirect employees. The new mining project, which includes the development of a new refinery and conversion project, is expected to create an additional 2000 jobs during construction and up to 800 jobs during operations.

"However, this project's initiation remains contingent on finalising the power supply agreement between Skorpion Zinc Mine and NamPower to ensure that Namibian consumers do not cross subsidise the mine," Alweendo said.

Currently, only about 40% of Namibia's electricity needs are met through local generation facilities, mainly from the Ruacana Hydro Power Station (347MW) and various existing IPPs utilising renewable energy resources such as solar and wind. The bulk of the country's power is imported from neighbouring countries and the Southern

African Power Pool (SAPP) to address the shortfalls in local supply.

ADDITIONAL CAPACITY

The latest Ministerial Determination follows the 2018 directive intended to add an additional capacity of 250MW to enhance Namibia's energy self-sufficiency. However, many of the projects are expected to reach their commercial operations as of this year through to 2027. These include a 50MW Anixas II heavy oil power station in Walvis Bay that will come into operation in early 2025.

The N\$2.3 billion 40MW Otjikoto Biomass Power Station is scheduled to commence operations in June 2027, while the 20MW Khan IPP solar plant near Usakos will begin operating in February 2025.

In addition to the Ministerial Determination, the Modified Single Buyer (MSB) Market Model which was established in 2019 is currently fully operational. The MSB model was created to encourage further investment by the private sector in the electricity market. The MSB market allows Eligible Sellers, acting as IPPs, to transact directly with Contestable Customers, enabling transmission-connected customers to purchase up to 30% of their energy demand from Eligible Sellers, excluding NamPower. This approach not only promotes competition but also attracts private sector investments, which are crucial for expanding the country's energy generation capacity.



OWN AND OPERATE: NamPower will develop a new 80MW Omburu Solar PV Power Plant to be built adjacent to the existing Omburu plant in the Erongo region.



GREEN ELECTRICITY: The Renewstable® Swakopmund project is expected to generate 142 GWh of green electricity annually, powered by 85 MWp of solar PV capacity and 230 MWh of green hydrogen storage.

HDF Energy Namibia's N\$4.5 billion Innovative Renewable Energy Project Eyes 2026 Take Off

Construction of Hydrogène de France (HDF) Energy's innovative renewable energy project in the Erongo region, known as the Renewstable® Swakopmund, is likely to commence next year if all goes according to plan.

The unique power project is being spearheaded by HDF Energy Namibia (PTY) LTD, a subsidiary of French company and global leader in hydrogen infrastructure, HDF Energy.

Project Developer, Iyaloo Akuaake, told **Etango** that HDF Energy Namibia aims to reach financial close (FC) and final investment decision (FID) by late 2025.

"Construction is expected to take approximately 24 months, with the plant scheduled to begin commercial operations by Q4 2027. These timelines depend on finalising a Power Purchase Agreement (PPA) by Q1 2025," she said.

HDF Energy Namibia is in discussion with NamPower, which is the intended off-taker for the electricity generated by the project.

Located on a 400-hectare site in Swakopmund, the project

will leverage Namibia's abundant solar and wind resources to produce clean, reliable energy. It will combine three key technologies: solar photovoltaic (PV) panels, battery energy storage systems (BESS), and green hydrogen production. The green hydrogen, produced through electrolysis using solar power, will be stored and used to generate electricity at night or during periods of low sunlight. This will ensure a stable, 24/7 power supply to the grid, addressing the intermittent nature of renewable energy sources.

Akuaake said the plant is expected to generate 142 gigawatt-hours (GWh) of green electricity annually, powered by 85 megawatts-peak (MWp) of solar PV capacity and 230 megawatt-hours (MWh) of green hydrogen storage.

"With an investment of N\$4.5 billion, including significant foreign direct investment (FDI), the project aligns with Namibia's Vision 2030 and its Green Hydrogen Strategy (2022). It also supports the country's goals for energy security, sustainability, and reducing greenhouse gas emissions," the HDF official said.

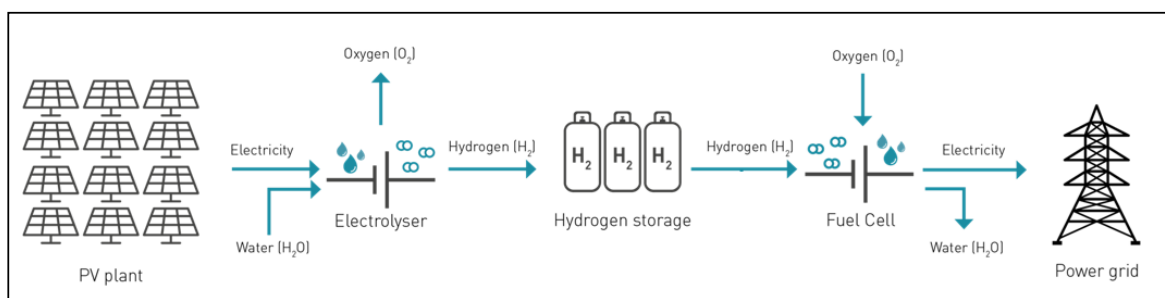
Renewstable® Swakopmund has been under development since 2021 and has achieved significant milestones to date. These include obtaining an Environmental Clearance Certificate, completing preliminary debt-funding arrangements, securing the necessary land, and receiving subsidies. Additionally, the project has garnered strong support from the Namibian government.

It is part of HDF Energy's global rollout of Renewstable® power plants, with the first of its kind currently under construction in French Guyana and expected to be operational by late 2026.

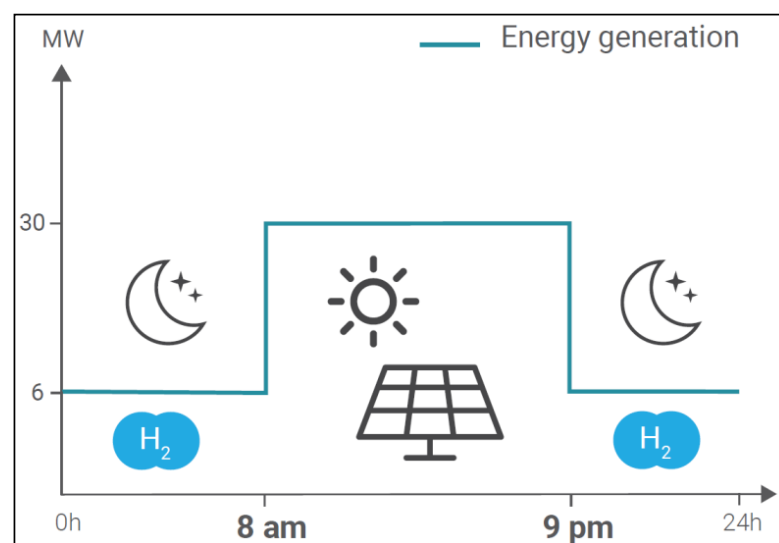
The Renewstable® Swakopmund project will integrate several advanced technologies to deliver reliable, round-the-clock electricity. It will operate as follows:

- Solar PV panels will generate electricity during the day.
- Excess solar energy will be used to produce green hydrogen through electrolysis, a process that splits water into hydrogen and oxygen using renewable electricity.
- The hydrogen will be stored and later converted back into electricity using high-power fuel cells at night.
- Lithium-ion batteries will provide short-term energy storage at night as well.

This combination ensures a stable electricity output: 30 MW during the day and 6 MW at night. The system is designed to be modular, scalable, and capable of supporting grid stability, including grid restoration and balancing services. A compressed flow chart and generation profile is indicated below.



FLOW CHART: Process flow of the Swakopmund Renewstable® Power Plant.



Swakopmund Renewstable® generation profile. - Illustrations by HDF

The Renewstable® Swakopmund project is earmarked to offer significant benefits for Namibia's energy sector, economy, and environment. Here are some of the key benefits envisaged:

- Provision of a clean, sustainable energy solution, reducing reliance on imported fossil fuels and lowering greenhouse gas emissions.
- Expected to create approximately 2,000 jobs (direct, indirect, and induced), including 45 permanent positions and 300 contracted or temporary roles.
- Active involvement of local micro, small, and medium enterprises (MSMEs) in providing goods and services. For example, HDF has already supported a youth-founded company by providing training, technical equipment, and office space to prepare them for the green hydrogen industry.
- Addressing Namibia's skills gap by fostering expertise in renewable energy and green hydrogen technologies.

InnoSun Sorexa Solar Plant: A Groundbreaking Renewable Energy Project

The Sorexa solar plant, located near Arandis, in the Erongo region of Namibia, marks a significant milestone for the country's renewable energy landscape.

With a first phase of **9.8 megawatt peak (MWp)**, this innovative project is set to deliver clean electricity to:

- power **Orano's desalination plant**, providing an affordable and sustainable solution to meet the growing water needs of the Erongo region,
- power any Namibian electricity consumer wishing to decrease its electricity bill, and
- export through the Southern African Power Pool (SAPP).

It is the first phase of a much larger 50 megawatt (MW) solar project, dedicated to supply power to several of Namibia's large power consumers as well as further boosting Namibia's export dedicated generation.

Pioneering a New Energy Market Model

The Sorexa project stands out for its alignment with the **Modified Single Buyer (MSB)** market model, introduced in Namibia in 2019 and fast gaining momentum. This model allows independent power producers (IPPs) to sell electricity directly to end-users while also enabling the potential for exports.

By leveraging this progressive framework, Sorexa is helping to reshape the national energy market, demonstrating the viability of private sector involvement in Namibia's energy transition.

The project reflects InnoSun's long-standing confidence in Namibia as a hub for renewable energy investment. It also highlights the company's commitment to innovation and sustainability in emerging markets, setting a strong precedent for future developments under the MSB model.

Construction Progress and Milestones

Construction at the Sorexa site is almost complete, with the solar park being 100% built and the grid connection infrastructure being finalised, to ensure the seamless integration of the plant into Namibia's power network.



INNOSUN'S 5th SOLAR PARK: The Sorexa solar project near Arandis under construction. **Photo: InnoSun**

Commissioning is scheduled for **April 2025**, pending the completion of final technical adjustments and grid connection. Once operational, the plant will join InnoSun's portfolio as its **fifth solar park in Namibia**, contributing to the diversification and decarbonisation of the country's energy mix.

Partnering for Development

The Sorexa project is made possible through a partnership with the Development Bank of Namibia (DBN), which funded the project with N\$66 million. This collaboration underscores the critical role of financial institutions in enabling renewable energy development and fostering economic growth.

The remainder of the investment, N\$70 million, was financed by InnoSun with the support of its French mother company InnoVent.

A Step Towards Sustainability

InnoSun's investment in the Sorexa project exemplifies the company's broader mission to support sustainable development in Namibia. By powering industrial facilities such as Orano's desalination plant with renewable energy, Sorexa will contribute to reducing reliance on fossil fuels and lowering carbon emissions in the region.

This project serves as a testament to Namibia's potential as a leader in renewable energy innovation and as a reliable partner for sustainable business ventures.

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44 MW InnoVent Diaz Wind Farm in Lüderitz

A Milestone for Renewable Energy in Namibia

The **InnoVent Diaz Wind Farm**, located near the harbour town of Lüderitz in southern Namibia, represents a significant step forward in the country's renewable energy transition.

With a total capacity of **44 megawatts (MW)**, the wind farm will consist of **11 turbines**, delivering an expected annual production of over **230 GWh** of clean electricity. This will represent 6% of Namibia's electricity demand, and 13% of the country's generation, ensuring a significant reduction of the electricity imports while avoiding the emission of approximately 200,000 tons of CO₂ per year!

Supporting Namibia's National Energy Plan

Diaz project forms part of Namibia's National Integrated Resource Plan (NIRP), which prioritises the development of renewable energy sources to reduce reliance on imports and fossil fuels. By utilising the abundant wind resources of the Lüderitz region, the wind farm will contribute to enhancing the country's energy independence and sustainability.

Progress on Construction and Logistics

On-site, the construction is progressing at full speed. Civil engineering works, including road construction, platform preparation, and foundation work, are well underway.

A significant milestone was achieved on 16 February 2025, with the arrival of wind turbine components at Lüderitz. This shipment, which departed from Lusi Port in China on 9 January 2025, includes the blades, hubs, rotors, and nacelles. With the components now on-site, assembly of the turbines will commence soon, marking a pivotal stage in the project.

Local Impact and Job Creation

The Diaz Wind Farm is not only a project of national importance for Namibia's energy strategy, but also a driver of local economic development. The construction phase has created numerous jobs for local workers and engaged Namibian companies to supply materials and services.

The project exemplifies how renewable energy can have a direct positive impact on the economy, fostering skills development and providing opportunities for local businesses.



READY FOR SHIPPING: Wind turbine blades being prepared for shipping at the Lusi harbour in China.



ARRIVED: A milestone was achieved on 16 February 2025, with the arrival of wind turbine components at Lüderitz.



DIGGING DEEP: Foundation works at Diaz Wind Farm.
Photos: InnoVent

A Vision for Namibia's Renewable Energy Future

The Diaz Wind Farm underscores InnoVent's commitment to advancing renewable energy in Africa, while supporting Namibia's environmental and economic goals. It is the largest and 7th investment of InnoSun's mother company in the country, totalling 75MW for a total capital expenditure of N\$2.5 billion.

The project will play a key role in diversifying the country's energy mix, reducing emissions, and ensuring a sustainable future.

With the arrival of turbine components expected in February 2025, the Diaz project is on track to achieve its ambitious goals, setting a new benchmark for wind energy development in Namibia.

About InnoVent and InnoSun

InnoSun is the Namibian holding of **InnoVent**, a French renewable energy developer created in 2001 by Grégoire Verhaeghe. InnoSun plays a key role in the development of clean energy projects in Namibia and collaborates with local partners to implement sustainable energy solutions. The company is partially owned by **Black Diamond Investment (BDI)**, ensuring a strong local presence and contribution to Namibia's economic development. InnoSun's achievements, including solar and wind farms across the country, reflect InnoVent's long-term commitment to investing in Namibia's energy transition.



Environmental **Investment** Fund
of **Namibia** | ensuring sustainability

EXPRESSIONS OF INTEREST (EOI)

PROCUREMENT MANAGEMENT UNIT

The Environmental Investment Fund (EIF) on behalf of the Namibia Green Hydrogen Programme invites international and local reputable service providers to express their interest for the following.

Reference Number	Description	Non-Refundable document levy
SC/EOI/EIF- 1/2024	Expression of Interest for the Shortlisting of consultant for the Strategic Environmental and Social Assessment (SESA) for Green Energy Production, Industrialisation and Common User Infrastructure in the Central Green Hydrogen Valley.	Free
SC/EOI/EIF- 2/2024	Expression of Interest for the Shortlisting of consultant for the Project Scoping/ Site Selection Study: Development of Wind Resource Assessment and Meteorological Mast Project Site Selection.	Free

- EOI document can be requested from procurement@eif.org.na

SUBMISSION OF BIDS:

Hard copies/physical bids to be delivered at:
Environmental Investment Fund of Namibia Head Office,
1st Floor, Heinitsburg Heights, c/o Heinitsburg & Dr. Theo Ben-Gurirab Street, Klein Windhoek

OR

Electronic bids to be emailed to: procurement@eif.org.na

General queries can be addressed to:

Procurement Management Unit

Tel: +264 61 431 7733/38

Email: procurement@eif.org.na

Closing Date and Time for Submission:

Friday, 21 February 2025 at 12H00 PM Namibian Time



Namibia
Green Hydrogen
Programme

Namibia Seeks N\$2.7b from Climate Fund for Green Hydrogen



IN PRODUCTION: The HyIron production facility earmarked to start production by the end of February.

Namibia has approached the Climate Investment Fund (CIF) for funding to support the country's emerging green hydrogen production sector.

The CIF is a leading multilateral climate finance partnership that channels concessional finance through six multilateral development banks (MDBs) for both upstream advisory and downstream investment activities to support climate action. The World Bank Group, including the International Finance Corporation, the African Development Bank, the Asian Development Bank, the European Development Bank, and the Inter-American Development Bank, are the implementing partners of CIF's investments.

The CIF comprises two funds, namely the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF).

Namibia's Green Hydrogen Commissioner James Mnyupe revealed that the country had requested US\$150 million (about N\$2.76 billion) from the multilateral climate fund.

"Countries around the world can apply for up to US\$250 million that they can use to invest in private sector companies. We have asked for about US\$150 million. We look forward to the feedback for that in quarter two this year," Mnyupe told the Namibia Press Agency (Nampsa).

"We continue to champion green industrialisation, with of course green hydrogen being a core part of that. But it is really green industrialisation we are after," he said.

The Commissioner said this year Namibia was anticipated to move beyond



OPTIMISTIC: Green Hydrogen Commissioner James Mnyupe



We continue to champion green industrialisation, with of course green hydrogen being a core part of that. But it is really green industrialisation we are after," - James Mnyupe

the planning phase, with some projects expected to begin production.

"We expect to launch the HyIron production facility, and to start

production by the end of February," Mnyupe said about the green iron project near Arandis in the Erongo region.

HyIron's Oshivela green iron production plant is expected to produce five tonnes of green iron per hour, powered by a 25-megawatt solar facility and 13.4 megawatts of battery storage during the day.

"That particular plant hopefully starts to operate this quarter. Then we are expecting facilities, such as Hyphen, to really start their feasibility in earnest. We expect to potentially construct our first ammonia bunkering facility this year. This will be a big tank that will store ammonia, and can be used to refuel ships or supply ammonia in the country," Mnyupe said.

He is optimistic that Hydrogène de France (HDF) Energy Namibia will start the construction of its renewable energy power plant in Erongo.

The HDF project will combine solar photovoltaic power with hydrogen production to provide baseload power for the Swakopmund municipality, he said.

The French company plans to generate 142 Gigawatt-hour of green baseload electricity per year.

"I think this year is the year of going beyond planning. Maybe we now start the construction of two or three key new plants, and start operating and producing a product that we start to trade this year," said Mnyupe.



INCLUSIVE GROWTH: EU Ambassador to Namibia Anna Beatriz Martins and NPC ED Michael Humavindu proudly display a dummy check signed by all the grant recipients and the EU.

Europe's N\$42m Grants Support Civil Society for Namibia's Inclusive & Sustainable Green Growth

The European Union Delegation to Namibia has awarded grants totalling N\$42 million to three Civil Society Organisations (CSOs) to assist them in enhancing the participation of Namibians in sustainable natural resource management, promoting equitable community benefits and transparent governance.

The funded projects will also focus on empowering youth, women and vulnerable groups in Namibia's extractive and green energy sectors.

The EU funding has been made under the "Towards Sustainable, Equitable, and Inclusive Green Growth in Namibia" initiative. The announcement of the funding was made at a media event on 14 January attended by EU Ambassador to Namibia Anna Beatriz Martins and National Planning Commission Executive Director Michael Humavindu.

The three grant projects that were awarded by the EU are:

- **Integrated Rural Development and Nature Conservation (IRDNC) and Namibia Development Trust (NDT):** Building stronger natural resource-based CSOs to improve community rights and benefits.
 - **Deutsche Welle (DW), Institute for Public Policy and Research (IPPR), Namibia Media Trust (NMT) and Legal Assistance Center (LAC):** Eco Dialogue Collective: Empowering media and civil society for a transparent green future.
 - **Namibia Nature Foundation (NNF):** Strengthening the capacity of CBOs in Namibia to engage in EIA processes.
- Ambassador Martins said by supporting CSOs and promoting democratic participation in the green energy



Just as we are committed to green growth, we are equally committed to good governance principles that uphold the rights and welfare of Namibian citizens. Growth that lacks transparency and accountability is unsustainable, and it is ultimately the people of Namibia who must benefit from these economic transformations.- Ambassador Anna Beatriz Martins.

transition, mining and extractives sectors, these projects will contribute to the goals of the strategic partnership between the EU and the Namibian Government on sustainable raw materials value chains and renewable hydrogen.

"Just as we are committed to green growth, we are equally committed to good governance principles that uphold the rights and welfare of Namibian citizens. Growth that lacks transparency and accountability is unsustainable, and it is ultimately the people of Namibia



EMPOWERED TO EMPOWER: EU and NPC officials with representatives of three grant projects that were awarded a total of N\$42 million by the EU. -Photos: EU

who must benefit from these economic transformations. We are therefore united with you in the conviction that economic progress must come hand in hand with respect for human rights, environmental stewardship, and the empowerment of all citizens," said the EU Ambassador.

NPC ED Humavindu commended the EU for supporting CSOs through a competitive proposal call. He said the NPC views and values CSOs as partners in developmental service delivery as well as potential agents for community support.

"The NPC therefore will ensure the finalisation of the National CSO policy with the stated aim to ensure that more CSOs are enabled, capacitated and incentivised to be able to take part in such competitive calls for proposals by our development partners. In the same vein, we wish to call upon the successful CSOs today to ensure that their work emanating from these grants leads to effective developmental outcomes," the ED said.

Humavindu said the NPC would like to see more community groups confidently appreciating the processes of Environmental Impact Assessments and having the necessary capacities to work through community development agreements arising from the exploitation of natural capital endowment within their areas of living.

"Similarly, the grant pertaining to ensuring information dissemination around green growth pathways is important to enable appropriate and well-informed community decisions around sustainable development," Humavindu said.

Ronny Dampers, representing the IRDNC and NDT, said it was important for CSOs to drive evidence-based advocacy, ensuring communities benefit from their natural resources.

Priscilla Mundilo, from the NNF, said: "Inclusive green growth demands collective action to involve communities in decision-making processes."

Peter Deselaers, representing the DW Akademie, IPPR, NMT and LAC consortium, said reliable information was crucial for accountability and inclusive participation in Namibia's green transformation.

The EU said there has been a lot of speculation, information and misinformation on what green hydrogen is or is not, on what the impact of extractive industries and green hydrogen might be on the environment, on what the real benefits will be for Namibians.

The three NGOs will thus assist in promoting such discussions, in an informed and objective manner, checking the facts, enhancing understanding and giving a voice to the local communities who are now excluded but are stakeholders in these rapidly expanding economic sectors.

Civil Society plays a crucial role in informing and shaping public opinion and public policies, in contributing to transparency, inclusivity and accountability. Growth that lacks transparency and accountability is unsustainable, and it is ultimately the people of Namibia who must benefit from these economic transformations.

"We intend to facilitate a participatory process, in which the concerns of communities, especially women and youth can be considered in decision-making processes.

We will support the training of journalists to strengthen journalists' technical and research capabilities, to the benefit of a strong media landscape in Namibia," said EU Ambassador Martins.

NAMPOWER GENERATION AND TRANSMISSION PROJECTS



GENERATION PROJECTS

NamPower is developing several projects as part of its Integrated Strategic Business Plan (ISBP) for the period 2020-2025 which are aligned with the objectives outlined in the Renewables Energy Policy to source at least 70% of energy from renewable energy source by 2030 and the National Integrated Resource Plan (NIRP) for the electricity sector which aims to achieve 80% self-sufficiency, in terms of energy, by 2028. Outlined, below are the projects, which are at different development stages:



OMBURU 20MW PV SOLAR PLANT: The plant was commissioned in 2022

51MW / 51MWh OMBURU BESS PROJECT - The project entails a stand-alone grid connected 51MW / 51MWh Battery Energy Storage System (BESS) which is currently being implemented at the Omburu Substation. The project will enable NamPower to cost effectively manage the energy demand and supply by performing energy arbitrage and supplying emergency energy. It will also provide various grid stability services enabling the grid to integrate additional intermittent renewable energy generation capacities, whilst ensuring security of supply. The Bid for the construction of the BESS Project was awarded to Shandong Electrical Engineering & Equipment Group Co., Ltd. And Zhejiang Narada Power Source Co., Ltd Joint Venture (SDEE & NARADA JV) and the Engineering Procurement Construction Contract Agreement was signed on 13 December 2023. The project is currently in the design and construction phase, with the Commercial Operation Date planned for Q4 2025.

40MW OTJIKOTO BIOMASS POWER PROJECT – The groundbreaking ceremony for the project took place in mid-November 2024 and construction has commenced. NamPower signed the Engineering, Procurement, Construction (EPC) Contract with Dongfang Electric International Corporation for the construction of the Biomass Power Station on 24 May 2024. Similarly, NamPower signed a Fuel Supply Agreement with four suppliers for a total of 180 000 tonnes on 24 May 2024. The EPC contractor and NamPower are currently working towards fulfilling the conditions to achieve contract effectiveness. Project completion date for the power station is planned for Q2 2027.

ROSH PINAH 100MW SOLAR PV PROJECT - The bid for the construction of the 100MW Rosh Pinah PV Power Station was awarded to the joint venture comprising of China Jiangxi International Economic and Technical Cooperation Co., Ltd. and China New Energy Development (Zhejiang) Co., Ltd. on 4 July 2024. The Bidder and NamPower are currently in Contract Clarification Meetings. NamPower increased the size of the project from 70MW to 100MW as per the ministerial approval obtained from MME. Project completion for the power plant is planned for Q2 2026.

54MW ANIXAS II POWER STATION - Project final commissioning is in progress and completion for the power plant is planned for Q4 2024 (the Anixas Power Station is not renewable, but it complements the integration of renewables to the grid because it is firm and dispatchable and may be operated to offset the intermittency associated with renewables).

TRANSMISSION PROJECTS

NamPower's Transmission Master Plan

NamPower's current Transmission Master Plan, covering the period from 2021 to 2025, outlines comprehensive expansion plans for the transmission network grid. It identifies development requirements for the next year, with annual updates to ensure alignment with the country's evolving electricity needs.

The plan involves the construction of new transmission lines, substations, and the upgrading of existing transmission infrastructure. These developments are essential to addressing internal supply limitations, accommodating future load growth, integrating new generation plants, and facilitating potential power transmission across the SAPP region.

400kV Auas-Gerus Transmission Line Project

Estimated project cost: N\$868 million

The 290-kilometre Auas-Gerus 400kV transmission line was commissioned in April 2024. This line strengthens the Auas-Van Eck-Omburu 220kV network, providing improved network stability, reduced losses, and enhanced contingency support. It also reinforces the network to the Gerus substation near Otjiwarongo, enabling NamPower to accommodate increased electricity transfer and wheeling via the Gerus-Zambezi high-voltage direct current (HVDC) link.

The transmission line runs from the Auas Substation near Dordabis to the Gerus Substation near Otjiwarongo and forms part of NamPower's strategic investment in expanding its 400kV transmission infrastructure backbone. The construction of the line, along with the extension of both the Auas and Gerus substations, was completed in July 2023 and commissioned in April 2024.

400kV Auas-Kokerboom Transmission Line Project

Estimated project cost: N\$2 billion

The Auas-Kokerboom project aims to enhance system reliability, improve network stability and redundancy, and increases electricity transfer capacity between the northern and southern regions.

Substation work at Auas, which overlaps with the Auas-Gerus project, has been completed to minimise costs associated with outages during commissioning. The Environmental Clearance Certificate for the line construction has been issued, and the line is currently under design by NamPower's internal design team, pending final resolution of routes and wayleaves in a number of positions. The bid for construction is expected to be advertised in the first quarter of 2025.

400kV Obib-Oranjemond Transmission Line Project

Estimated project cost: N\$1.2 billion

The Obib-Oranjemond line, NamPower's second interconnector to Eskom, is crucial for enhancing grid stability. NamPower is responsible for designing and constructing the line from Rosh Pinah to the Orange River, while Eskom will be responsible for terminating the line at Oranjemond, completing their section and connecting it to NamPower's portion of the interconnector as part of their scope.

NamPower's design team has completed the design for the 92-kilometre line, and construction commenced in November



2024. Line construction is progressing well and is expected to be completed by 28 May 2025.

The contract for the extension of the substation was awarded in the third quarter of 2024, and work has commenced, with completion expected in 2027. **Expected commissioning date: May 2025.**

220kV Otjikoto-Masivi Transmission Line Project

This project has been deferred as part of financial prioritisation. The EIA process has been completed, and an Environmental Clearance Certificate issued. NamPower is currently considering financing options for the construction of the line.

132/66kV Sekelduin Substation Development

Estimated project cost: N\$320 million

Location: Outskirts of Swakopmund (next to B2 road)

The civil works contractor completed all required tasks in March 2023. The transformers and switchgear have been delivered to the site, with all transformers assembled, pending the installation of the fire protection system. The procurement process for high-voltage equipment has been finalised, and the contract for the mixed technology switchgear was awarded, with manufacturing and testing under way.

The NamPower design team has completed the design for the 132kV transmission lines from Kuiseb to Sekelduin. The construction contract for the construction of these lines was awarded to and completed. **Expected commissioning date: May 2025.**

220/66kV Khomas Substation Development

Estimated project cost: N\$340 million

Location: Otjomuise, Windhoek

NamPower has secured land for the Khomas Substation through a resolution with the City of Windhoek, marking a significant milestone. The design phase for the substation is complete, and the bid for construction has been awarded, with construction to start January 2025. NamPower has also procured and delivered power transformers to the Brakwater depot, where they will remain until the substation is completed. **Expected commissioning date: December 2026.**

Namibia Power Corporation (Pty) Ltd

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www.nampower.com.na

Change of Leadership at REIAoN



Jean Basson



Tuwilika Johannes

The Renewable Energy Industry Association's long-serving dedicated Chairperson Jan Barend Scheepers stepped down from his position on 9 December, 2024, and has been replaced by **Jean Basson**, the Managing Director

of Eavion, deputised by **Tuwilika Johannes**, the Operations Manager of Charted Investments, as Vice Chairperson. Scheepers will remain an active member of REIAoN and will continue to participate in special assignments.



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DIALOGUE: Alweendo (4th from left) took part in a Ministerial Roundtable on “Accelerating Africa’s Energy Transition and Green Industrialisation Agenda”, which took place during the IRENA Assembly. **Photo: IRENA**

Alweendo Says Namibia Realising its Renewables Ambitions

Mines and Energy Minister Tom Alweendo recently told the Renewable Energy Agency (IRENA) Assembly held in Abu Dhabi from 11 to 13 January, that the country was on course towards achieving 70% of its energy supply from renewable sources by 2030.

Alweendo said as a country endowed with some of the world’s richest renewable resources, Namibia was steadfast in its commitment to achieving a clean energy transition.

“Guided by our National Energy Policy, National Renewable Energy Policy, and the Integrated Resource Plan, we are pursuing ambitious goals to enhance energy security, universal access, and regional collaboration.

“Our ongoing projects reflect this commitment, as Namibia aims to achieve 70% renewable energy supply by 2030,” the Minister said.

Alweendo said several key initiatives in the country were nearing completion, and new projects will be launched in early this year.

“These efforts highlight our determination to harness the potential of solar, wind, and biomass for a diversified energy mix.

“Namibia’s electrification strategy underscores inclusivity. By 2040, we aim to provide electricity to 432,000 households through a balanced approach of grid and off-grid solutions. This will bridge energy access gaps, particularly in underserved rural areas, ensuring that no Namibian is left behind in this energy transition,” the Minister told the IRENA assembly.

GREEN HYDROGEN STRIDES

Alweendo said Namibia was equally proud of the strides it had made in green hydrogen development, which positions the country as a key player in Africa’s energy landscape.

“Supported by a robust roadmap and partnerships with international stakeholders like Hyphen Hydrogen Energy, we aim to leverage our competitive advantage in producing green hydrogen for both domestic use and export. This initiative will not only drive economic growth but also contribute to global decarbonisation efforts,” the top government energy official said.

Alweendo, however, acknowledges that Namibia still faced several challenges in its electrification and green industrialisation agenda.

“The global energy transition requires innovative financing mechanisms and international cooperation. Namibia appreciates IRENA’s support in fostering collaboration and capacity-building among its members. We encourage continued focus on policy advisory and facilitating investments in regions with high renewable energy potential,” he said.

The 15th IRENA Assembly, themed “*Accelerating the Renewable Energy Transition – The Way Forward*,” convened ministers and high-level delegates from IRENA’s 170 member states, academia, development banks, CEOs, and youth representatives. Key discussions focused on tripling renewable energy capacity by 2030, enhancing ambition in Nationally Determined Contributions (NDC 3.0), supporting transitions in emerging economies, and leveraging innovative financial flows in developing countries.

“The world is undergoing rapid transformation, driven by a shifting geopolitical landscape and technological breakthroughs such as artificial intelligence. Amid these changes, renewables must remain a top global priority as the most effective way to keep climate and sustainable development goals within reach,” IRENA Director-General Francesco La Camera said while addressing participants.

SACREEE Hosts Inaugural SADC Sustainable Energy Week in Botswana



ACCELERATING SUSTAINABLE ENERGY SOLUTIONS FOR SADC: SACREEE Executive Director Kudakwashe Ndhluukula, Chairperson of the Solar Industry Association of Botswana, Karen Gibson, and James Molenga, Principal Energy Engineer in the Botswana Ministry of Minerals & Energy, during the medial launch of the SADC Sustainable Energy Week.
Photo: SADC

SACREEE Hosts Inaugural SADC Sustainable Energy Week in Botswana

The SADC Centre for Renewable Energy and Energy Efficiency (SACREEE) will launch the annual SADC Sustainable Energy Week from 24 to 28 February, marking a significant milestone in the region's energy landscape.

The inaugural Southern African Development Community (SADC) Sustainable Energy Week, to be held in Gaborone, Botswana, was initially planned to take place from 2 to 6 December, 2024, but was postponed due to unforeseen circumstances.

Under the theme 'Accelerating Sustainable Energy Solutions for an Energy Secure SADC Region,' the event will highlight SADC's commitment to promoting renewable energy and energy efficiency to enhance energy access and security across the region's member states.

Recognising the dynamic development within the energy sector of SADC member states, this event aims to address the evolving regulatory, policy, and institutional frameworks while fostering growth and investment, particularly in sustainable energy.

The energy demand in the region is growing rapidly, but challenges persist, including limited energy access averaging 50%, a constrained electricity supply system, and ongoing power shortages due to inadequate generation with a capacity shortfall amounting to 3,681MW in April 2024 as well as transmission capacity bottlenecks.

Additionally, the sector remains heavily reliant on fossil fuels and drought susceptible hydro-power. The SADC member states are committed to accelerate the implementation of the Regional Priority Power Projects

aimed at meeting energy security requirements and enhancing intra-regional power trading in the SADC region, leading to adequate, reliable and sustainable power being available to all customers at reasonable costs.

The event will bring together government ministries, policymakers, utilities, regulators, private sector investors, developers, researchers, and financiers. International Cooperating Partners, non-governmental organisations, civil society, industry associations, think tanks, and academia will also be present.

SACREEE invites all stakeholders to join them in this transformative event and contribute to advancing the sustainable energy agenda, ensuring a more secure and sustainable energy future for the SADC region.

The programme includes a high-level plenary, presentations, breakout sessions, focusing on critical areas such as policy and regulatory frameworks, financing mechanisms, grid integration, youth, gender, entrepreneurship, and innovative technologies as well as technical site visits.

The SADC Sustainable Energy Week is jointly organised in partnership with International Renewable Energy Agency (IRENA)'s 6th International Off-grid Renewable Energy Conference (IOREC), the 8th Southern African Solar Thermal Training & Demonstration Initiative (SOLTRAIN) Regional Conference, and an event by the Global Network of Sustainable Energy Centres (GN-SEC) coordinated by United Nations Industrial Development Organisation (UNIDO).

For more information and to explore opportunities for sponsorship and exhibition, please contact SACREEE at sadcsew@sacreee.org (www.sacreee.org).

Nopal Maltahöhe Project Aims To Be Trailblazer in Bioenergy & Renewable Liquefied Natural Gas

Ground has been broken at the N\$66 million Nopal Cactus Project, in the southern town of Maltahöhe, which is expected to drive renewable energy production and entrepreneurship in the Hardap region.

Facilitated by Namibia Investment Promotion and Development Board (NIPDB), the first-of-its-kind Nopal project will focus on bioenergy production, mainly base load peak electricity and renewable liquefied natural gas (LNG).

With this unique project, Namibia is set to be the first country in Africa to extract renewable energy from the cactus plant. The first phase of the project, spanning 500 hectares, represents an investment of approximately N\$66 million, with an estimated total investment exceeding N\$1.8 billion as bioenergy production scales up.

Beyond economic and environmental benefits, this initiative also aims to empower local communities by converting underutilised desert land into productive farmland.

Nicole Maske, the local partner in the project, said the aim of the Nopal project was to provide the country with renewable energy and at the same time be able to produce renewable LNG.

She said about 5MW of energy would be generated per 800 hectares of the project, while at least 60 jobs will be created in the first phase of the project, which is a big number for a small town like Maltahöhe. The project will also provide livestock fodder and help enhance food security.

The Canadian managing partner of the project, Stephen McNeil, also explained that Nopal project extends beyond energy and agriculture.

The project is seen as a game-changer for economic diversification, ensuring sustainability and new opportunities for Namibian entrepreneurs to take up opportunities in value-added products such as jams, syrups, sauces, salads, cactus seed oil and livestock fodder.

"Our vision is clear, we want to be part of the renewable new energy programs. There are about a billion people worldwide without power, and 700 million people in Sub-Saharan Africa without power. If we can't keep up now, what is going to happen in the future when we add 2 billion people to the world's population?" he asked.

McNeil said the cactus brings many benefits – it serves as great feedstock for bioenergy, ferments quickly, and turns into biogas, which contains methane and CO₂.

"You can extract the CO₂, and the methane can then be used to generate electricity or be converted into liquefied natural gas," he said.

Vice President and President-elect, Netumbo Nandi-Ndaitwah, in a statement delivered on her behalf, said: "With Nopal-derived biogas, we are unlocking a renewable energy source that will provide stable and sustainable baseload electricity, thereby reducing our reliance on fossil fuels, enhancing our energy security, and positioning Namibia as a leader in the global clean



GROUNDBREAKING INVESTMENT: Nopal Project's Namibian managing partner Nicole Maske and the Canadian managing partner Stephen McNeil, together with the Deputy Executive Director in the Office of the Vice President, Matheus Kaholongo, officiated at the groundbreaking ceremony in Maltahöhe on 6 February.



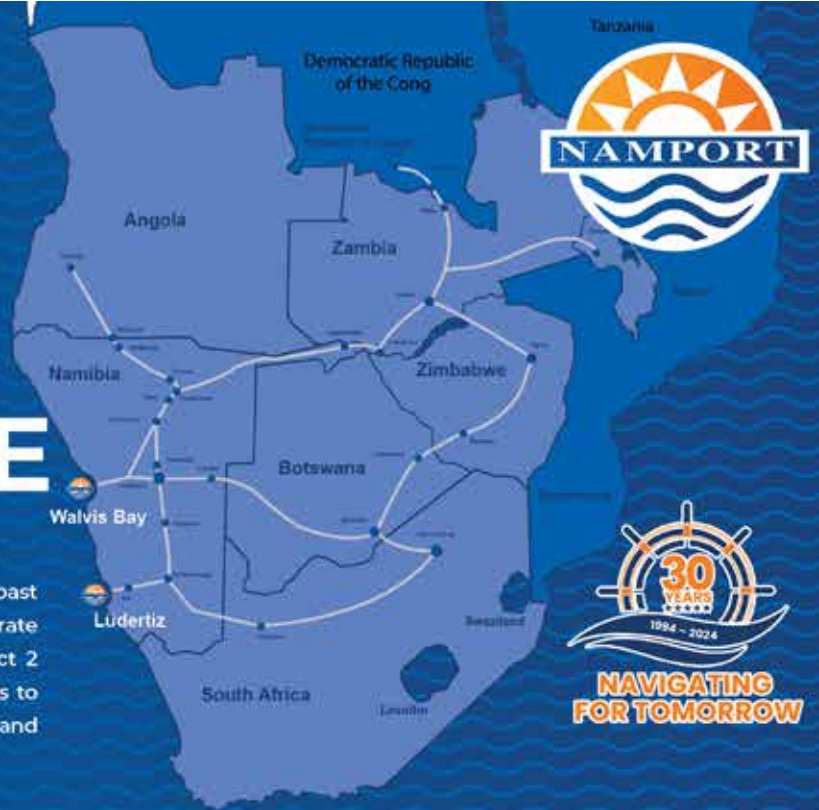
FIRST-OF-ITS-KIND: The Nopal Carbon Farming cactus project at Maltahöhe. **Photos: NIPDB**

energy revolution."

"As the world grapples with the pressing challenges of climate change, drought, and food insecurity, Namibia is taking the lead in developing renewable energy solutions," Nandi-Ndaitwah said.

THE ULTIMATE PORTS EXPERIENCE

The Ports of Walvis Bay and Lüderitz lie on the West Coast of Africa. The Namibian Ports Authority is a body corporate established by the Namibian Ports Authority Act, 1994 (Act 2 of 1994) as a state-owned enterprise. Namport's mandate is to exercise control and manage Namibia's ports, lighthouses and other navigational aids in Namibia and its territorial waters.



OUR SERVICES & THE INDUSTRIES WE SERVE

The Port of Walvis Bay oversees container imports, exports, and transshipments, along with bulk and breakbulk cargo for various industries, including petroleum, mining, construction, and fishing. Additionally, it caters to the tourism sector through a dedicated cruise liner berth and terminal.

The Port of Lüderitz oversees the export of mining commodities from the southern region of Namibia and the Northern Cape of South Africa. Additionally, it supports the local fishing industry and operates as a supply base for the oil and gas drilling campaigns.

TRADE ROUTES NAMPORT SERVES

Strategically located along the Namibian coastline, Walvis Bay provides direct access to principal shipping routes, making it a natural gateway for international trade. Its world-class infrastructure and equipment ensure reliable and safe cargo handling.

The favorable temperate weather conditions of the bay enable timely operations, thus facilitating Namibia's largest commercial port, the Port of Walvis Bay, to accommodate approximately 1,600 vessel calls annually, with a handling capacity of 10 million tons of cargo.

GEARED FOR GROWTH

Namport focuses on being the best performing seaports in Africa. Therefore, Namport continues to invest in port infrastructure to ensure Namibia is not only compliant with the International Ship and Port Facility Security code (ISPS), but is also geared towards opportunities for future growth.

In 2019, a new container terminal worth N\$4.2 billion was brought into operation. It provides infrastructure and deployment of ship-to-shore gantry cranes for the first time in Namibian port history, firmly establishing a competitive position in relation to other ports for the critical hinterland markets. This raises the handling capacity to 750 000 TEUs, which is double the previous 350 000 TEU's.

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NamPort Continues to Seek Smart Partnerships to Develop Sustainable, Green, and Digital Logistic Corridors

The Namibia Ports Authority (Namport) has entered into a Memorandum of Understanding (MoU) with APS – Port of Sines and Algarve Authority, Portugal, which seeks to enhance knowledge exchange, capacity building, and operational excellence between the two port authorities.

The agreement, signed by Namport Chief Executive Officer Andrew Kanime and his APS counterpart José Luís Cacho, marks a new era of maritime cooperation between Namibia and Portugal, paving the way for mutual growth, innovation, and sustainable economic development.

Namport has moved to strategically position itself as a major player in the export of green hydrogen to European markets. Namport and the Port of Rotterdam, in the Netherlands, have also entered into an agreement to collaborate on various areas, including facilitating the forecasted growth and flow of the green hydrogen supply chain from Namibia to Europe.

The latest agreement with Administração dos Portos de Sines e do Algarve, SA, seeks to foster collaboration in developing sustainable, green, and digital logistic corridors. The MoU aligns with the European Commission's Global Gateway initiative, which aims to mobilise €300 billion in investment for smart, clean, and secure connections in energy, transport, and digital sectors.

The Port of Sines is positioned as a key European logistics hub under this initiative, given its natural characteristics and geostrategic location. Namibia, with its abundant renewable energy resources and critical raw materials, aims to become a global leader in green hydrogen production.

The Ports of Walvis Bay and Lüderitz play a strategic role in supporting this vision by facilitating exports and enhancing regional trade flows. The partnership between the Namport and Port of Sines has special relevance in the development of an Atlantic Hub and logistic corridor for the handling of critical raw materials, synthetic fuels, Green Hydrogen, and its carriers.

The MoU is valid for five years, during which the parties will explore potential synergies within the identified areas of collaboration in port development. This collaboration marks a pivotal step in potentially enhancing trade and logistics between Namibia and Portugal, reinforcing their positions as strategic hubs for sustainable energy and global trade.



GREEN CORRIDOR: Namport CEO Andrew Kanime and his Portuguese counterpart José Luís Cacho with the Memorandum of Understanding (MoU) signed by the two entities.



STRATEGIC PARTNERSHIP: Namport CEO Andrew Kanime and APS CEO José Luís Cacho with senior staff from the Portuguese Embassy in Windhoek and from Namport during the signing ceremony.
- Photos by Namport

OPINION



Who Owns Namibia's Green Future?

BY BERTHA TOBIAS

Namibia has captivated global attention with its daring aspirations to become a green hydrogen leader, leveraging a competitive advantage in the form of abundant wind and sunlight.

Presented by Namibian authorities as a silver bullet to both job creation and progressive climate action, the Dâures Green Hydrogen Village (poised to become Africa's first 100% net-zero green community) and Hyphen Hydrogen Energy's US\$10-billion (about N\$184 billion) project at the Tsau //Khaeb National Park are the poster children for Namibia's green hydrogen dreams.

Most Namibians are sceptical. Some of the scepticism is because of a legitimate inability to decipher the complicated industry jargon. Some of the scepticism emanates from the logistical concerns – green hydrogen is a highly flammable gas which is notoriously difficult to transport due to its low volumetric energy density.

What I've decided to coin the green hydrogen 'spectrum of sentiment' ranges from staunch enthusiast to devoted critic. Regardless of your position on the spectrum, we must all be invested in ensuring that Namibia is not reduced to a pawn in the global geopolitical chessboard of decarbonisation and net zero targets.

DECARBONISATION PATHWAY

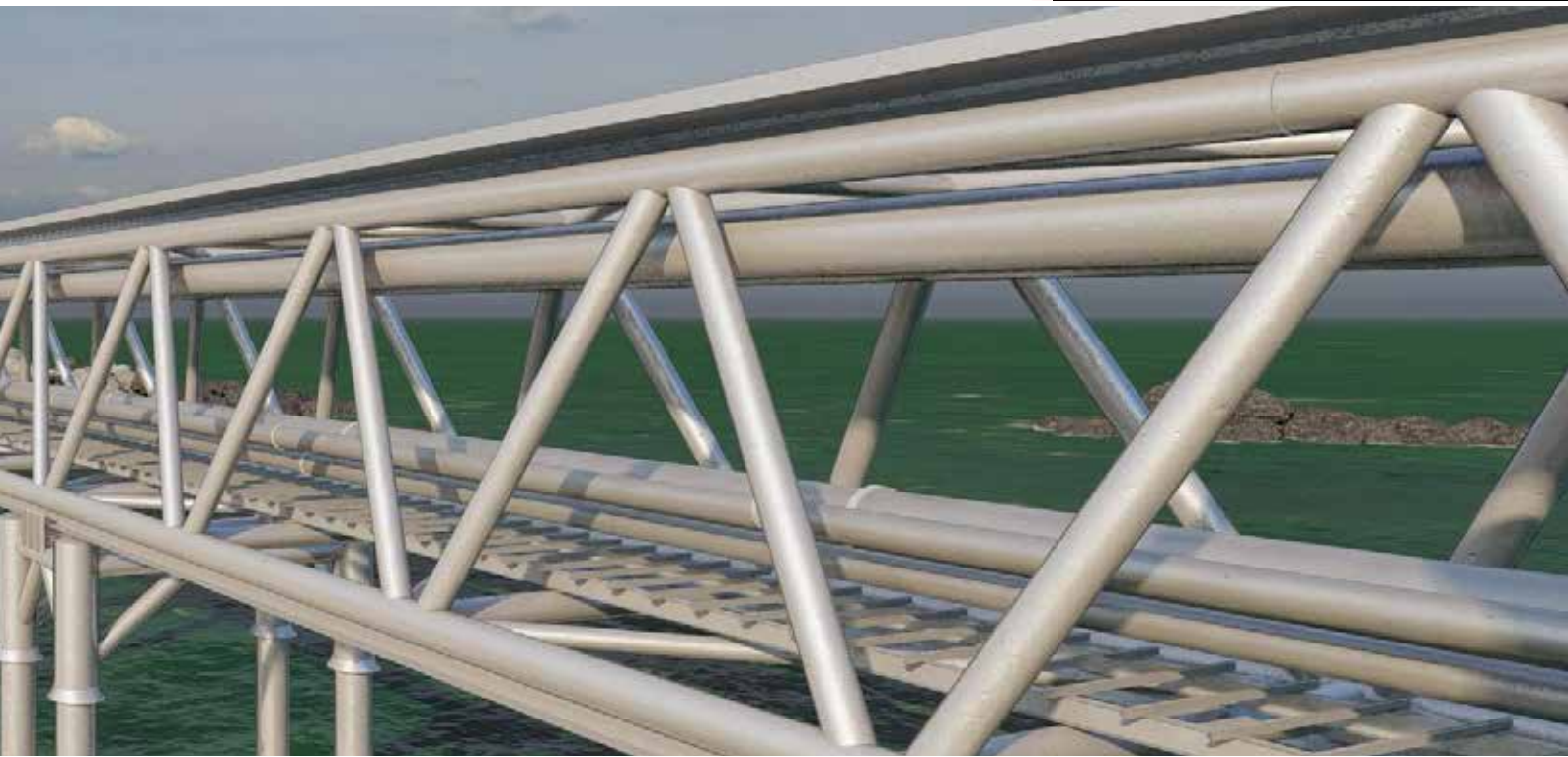
Green hydrogen is a promising decarbonisation pathway – if well executed.

Namibia's green hydrogen dreams are being financed by the German Economic Affairs and Climate Ministry and the European Union. Japan is also an apparent trade partner.

While these developments are promising, they implore reflection about Namibia's relational agency in green



Most Namibians are sceptical. Some of the scepticism is because of a legitimate inability to decipher the complicated industry jargon. Some of the scepticism emanates from the logistical concerns – green hydrogen is a highly flammable gas which is notoriously difficult to transport due to its low volumetric energy density.



hydrogen partnerships.

History is abundant with examples of developing countries which have been reduced to political, economic and socio-technical fodder for the Global North. Economic geography researchers Benedikt Walker and Linus Kalvelage offer a helpful analytical starting point to conceptualise Namibia's green hydrogen trade relations.

Walker and Kalvelage frame decarbonisation as a state project from which 'extraterritorial institutions' emerge.

These institutions, defined as organisations that are not controlled by actors in the territories where they operate, strategically and proactively shape dynamics abroad by derisking, creating assets and establishing a market.

Indeed, extraterritorial institutions must coordinate state-state interests while respecting sovereign territorial rights of the host country.

'FREE LUNCHES'

At the risk of negating Namibia's position as an autonomous, self-determining state with its own independent vision for climate action, the apparent free lunches dished out for green hydrogen development illustrate how global extraterritorial institutions are subtly and effectively reshaping sovereignty through green hydrogen climate finance mobilisation.

Trade partners like Germany are wielding strategic bargaining power in relation to their investments and technical expertise in the country's green hydrogen vision.

Obviously, bilateral agreements for capital intensive climate projects are not a new or unique phenomenon in international trade.

However, we cannot deny the political awkwardness of staking the bulk of our climate ambitions on our former imperial power.

Outsourcing net zero environmental policy creates a

push-and-pull between external priorities and Namibia's own developmental ambitions.

POWERFUL FOREIGN ACTORS

The involvement of powerful foreign actors means that key decisions about land use, resource allocation and energy exports are no longer solely in Namibia's hands.

Germany has stressed it would only import excess energy that Namibia doesn't use for domestic consumption.

However, this interest in Namibia's green hydrogen industry must not be misinterpreted as a noble, self-sacrificing act on the part of the international community.

In an active effort to meet its climate targets and decarbonise its hard-to-abate sectors like heavy shipping or aviation, Germany cannot produce enough green hydrogen domestically to satisfy its energy demand.

The country's import strategy outlines a framework to meet predicted demand for hydrogen and its derivatives, which the government is estimating to reach 95 to 130 terawatt hours (TWh) by 2030. About 50% to 70% of this demand is expected to be met by imports, making Germany one of the world's largest hydrogen importers in the future.

True partnerships require Namibia to take an assertive role in defining the terms of collaborative, dignified trade. Without clear policies and frameworks, Namibia risks becoming overly dependent on external partners who may prioritise their own decarbonisation goals over the country's broader economic and broader development goals.

Bertha Tobias is a Rhodes Scholar pursuing a full time Master of Science in Environment, Enterprise & Sustainability at Oxford University. You can connect with her on bertha.tobias@sant.ox.ac.uk

OPINION

Hyphen Hydrogen Seeks to Maximise Socio-Economic Impact While Minimising Footprint in Precious National Park

BY SHELDON HUSSELMANN

We know it really matters HOW Hyphen Hydrogen Energy delivers green hydrogen for Namibia. It is critical that we acknowledge and position our project in its overall context – balancing the positive socio-economic impacts it will bring to the country and its people, whilst identifying and minimising its environmental impact.

We will do this through continuing to work directly with local communities and through very selective siting of infrastructure within the vast project area.

Namibia's position in the world

Globally, there is a strong commitment to transition towards a low-carbon future in a manner that is equitable and tailored to the unique contexts of each country. A critical component of this transition is the adoption of green hydrogen, which plays a vital role in helping heavy emitting industries – such as steel, cement, and fertiliser – decarbonise.

With its extensive, largely uninhabited and protected arid coastline, Namibia is strategically positioned to contribute to global decarbonisation efforts while simultaneously expanding economic opportunities for its population.

The potential for socio-economic improvement in Namibia is significant. Investments in green hydrogen can lead to job creation, enhanced training opportunities, and increased tax revenues, thereby stimulating the growth of new industry.

Hyphen aims to be the first step in the implementation of the Namibian government's strategy for the development of a large-scale green hydrogen industry in various regions in-country.

But this transition towards a low-carbon economy must be approached with care, and the development of Namibia's green hydrogen sector cannot be at the expense of protected ecosystems and biodiversity. For Namibia to grow, we need to strike a balance between protecting the environment and enabling economic development.

A balancing act

To achieve this, from the outset, Hyphen has prioritised the environment in every decision we make.

As the development of Hyphen's project progresses, multiple workstreams are operating simultaneously to deliver the benefits swiftly. For example, we have carried out extensive pre-feasibility environmental work to



prepare for the Environmental and Social Impact Assessment (ESIA) and guide the project design.

Typically, ESIA work follows detailed engineering design phases, however, to ensure environmental considerations are prioritised in our engineering work, both processes are being conducted in parallel, thus facilitating early application of what we call the 'mitigation hierarchy.' This is where we design our engineering program to limit as far as possible negative impacts to biodiversity thus acknowledging the complexity and sensitivity of the surrounding environment.

The field work conducted during the pre-feasibility phase has been essential in enhancing our understanding of the environmental condition on-the-ground. Adhering to the mitigation hierarchy, we have used an approach where the environmental sensitivity guides the placement of infrastructure. For instance, we have situated our solar generation infrastructure – which requires the most land of all project components – away from the most critical conservation areas.

International best practice

Namibia has a strong history of protecting its sensitive environments – it is one of the few countries in the world where protection of the environment is enshrined in its highest law,

the Constitution. Hyphen is committed to developing Namibia's hydrogen industry in alignment with Namibian environmental legislation and the highest international standards.

During the project bidding phase, Hyphen's proposed project footprint was guided by the biodiversity sensitive areas mapped in the Tsau //Khaeb National Park's (TKNP) management plan further demonstrating our commitment to the mitigation hierarchy, purposefully positioning our project infrastructure in areas which are the least ecologically sensitive – a decision we have maintained. We are also scaling and bundling up infrastructure we will use such as pipelines and powerlines that can also be used for future hydrogen development within TKNP, which is recognised as international best practice for minimising ecological impacts.

Bringing Namibians along on the journey

Extensive public consultation has also been a priority for Hyphen. Over the past two years, we have conducted a National Green Hydrogen Roadshow in partnership with the Government of Namibia, alongside targeted engagement with local and international conservation non-governmental organisations early last year.

As we move into the formal ESIA process, we are committed to comprehensive public consultation efforts that go beyond legal requirements. These requirements will include mandatory newspaper notices, notices on site and direct correspondence with all adjacent landowners and occupiers. Additionally, we plan to broadcast information via radio and hold focus group meetings at a local community level during the scoping phase of the ESIA.

Paving the way forward

If Namibia is to participate in helping the world achieve its global decarbonisation goals and use the opportunity to drive Namibia's economic prosperity for the benefit of its people, the right balance needs to be found in crafting an approach for environmentally responsible development.



SENSITIVE ENVIRONMENT: One of Hyphen Hydrogen Energy's Meteorological Masts located in Tsau //Khaeb National Park. The masts are wind measuring towers used by to model the energy yield of wind and solar resources in Namibia.

Photo: Tabby Moyo

Hyphen is committed to achieving this. From the extensive pre-feasibility work, the forthcoming ESIA guiding the project design, and everything else we learn along the way, Hyphen is dedicated to ensuring our project is developed responsibly. It is this commitment that will help us minimise our ecological footprint while delivering transformative opportunities for the Namibian people.

Sheldon Husselmann is Senior Project Developer - Environment Workstream Lead - at Hyphen Hydrogen Energy

South Africa's Energy Landscape Set for Major Transformation in 2025

South Africa's energy sector is poised for significant changes in 2025, driven by evolving regulations, technological advancements, and the urgent need to address long-standing energy challenges.

Amid growing global emphasis on sustainability, the country faces the complex task of balancing legacy infrastructure, increasing energy demand, and opportunities for renewable energy solutions such as solar power and battery energy storage systems (BESS).

The South African government has revised its Integrated Resource Plan (IRP), setting the course for electricity supply until 2050. The updated plan emphasizes a diversified energy mix, incorporating coal, renewables, and gas, while addressing grid constraints and the decommissioning of coal units. Stakeholders are pressing for certainty, as the IRP2019 is widely considered outdated.

Initiatives such as the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) and amendments to the Electricity Regulation Act—raising the licensing threshold for embedded generation from 1MW to 100MW—signal progress toward decentralisation. However, execution remains a concern.

"While there are positive legislative movements, translating policy into sustained action will require significant investment in infrastructure, efficient processes, and grid capacity," said Claude Peters, Managing Director of RenEnergy Africa.

Peters also highlighted financial risks, including the potential impact of high fixed electricity costs and complex wheeling charges on renewable energy investments.

With abundant solar resources and declining photovoltaic (PV) system



costs, solar energy remains central to South Africa's renewable energy strategy. The 12B tax benefit continues to incentivise commercial and industrial solar projects, while solar carports and rooftop installations gain traction in sectors such as agriculture, retail, and manufacturing.

Expansion of Battery Energy Storage Systems

Advancements in battery technology and reduced costs are driving the adoption of BESS. These systems provide cost savings through time-of-use arbitrage and ensure consistent power during grid outages caused by aging infrastructure and maintenance issues. The combination of solar PV and BESS creates a robust energy solution.

Although still in its early stages, EV adoption is expected to grow. Policies supporting EV integration, such as tax rebates and subsidies announced by President Cyril Ramaphosa, along with Cape Town's plans for dedicated EV taxi lanes, signal a shift in urban transport. However, this growth raises concerns about increased electricity demand and grid capacity, necessitating renewable energy deployment to support the transition.

South Africa's decarbonisation efforts are driven by international commitments under the Paris Agreement and private-sector initiatives. Companies are setting net zero targets to meet global sustainability standards and maintain competitiveness, aligning with both national goals and customer expectations.

Challenges and Opportunities

Despite opportunities, challenges such as grid instability, bureaucratic inefficiencies, and slow policy implementation persist. However, these obstacles are spurring innovation, with businesses turning to decentralized energy solutions.

As South Africa navigates its energy transition, partnerships with innovative solution providers like RenEnergy will be critical in shaping a sustainable and resilient energy future. -SolarQuarter

**Who:**

- Installers
- Suppliers
- Consultants
- Contractors
- IPPs
- Financiers
- Trainers
- Students

What:

- Solar PV
- Wind
- Biomass
- Electric Mobility
- Green Hydrogen



Mission: To provide a forum for Namibian businesses in the Renewable Energy and Energy Efficiency sector to set technical and ethical standards and to be a voice of the Renewable Energy private sector at large.

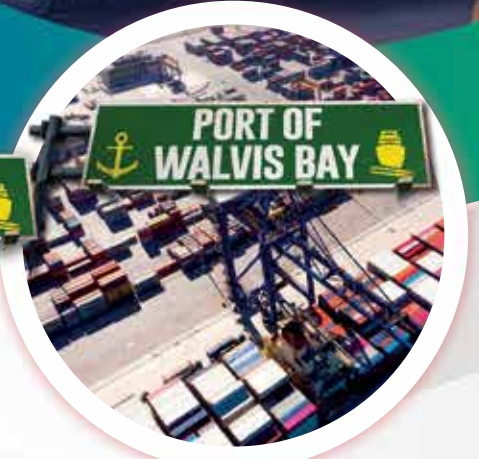
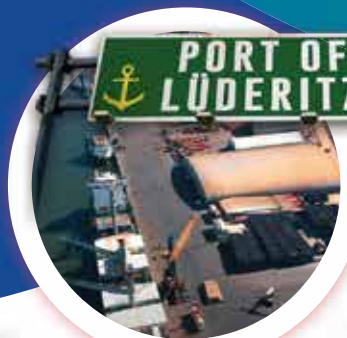
Vision: To assist Namibia in becoming an Energy sufficient hub, with an adequate supply of green energy from trustworthy and reliable organizations.



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