



MAY - JUNE 2026

NAMIBIA-EU ROADMAP



**NAMIBIA PUSHES FOR
LOCAL MANUFACTURE
OF SOLAR PANELS,
ELECTROLYSERS**



**GOVERNMENT LOOKS
AT NATIONWIDE EV
CHARGING NETWORK
ROLLOUT**



**BUILDING RENEWABLES
CAPACITY THROUGH
EXPERIENCE**



**African
Green Industries
Summit**

9-10 September 2026
Swakopmund, Namibia

POWERING AFRICAN INDUSTRIES FOR SUSTAINABLE DEVELOPMENT

Uniting leaders, catalysing innovation and
building a **greener**, prosperous Africa.

10+ Ministries
600+ Delegates
50+ Speakers
100+ Youth Participants

Strategic Conference

The summit embarks on a transformative journey into the future of sustainable industries. The Conference will shape and frame the critical dialogue that will position Africa as a green industrial hub.

Leadership Roundtables

The summit will feature high-level, closed-door, invitation-only, Leadership Roundtables. These meetings will gather selected Ministers, C-level executives and policymakers.

Business Matchmaking

Matchmaking connects landowners, developers, investors, and energy buyers through structured matchmaking to accelerate renewable energy projects.

Side Events & Site Tours

The summit will provide an opportunity for delegates to network and book site tours to the various Green Hydrogen Projects hosted in the Erongo Region.

EnergyX Concert

The EnergyX Concert is an official side-event where delegates can enjoy live performances and entertainment.

WHO SHOULD ATTEND?

- ✓ Government & Policy Makers
- Industry Leaders & Entrepreneurs
- Investors & Financial Institutions
- Innovators & Technology Providers
- NGOs & Development Partners
- Academia & Research Institutions



**BE PART OF AFRICA'S
GREEN INDUSTRIAL
REVOLUTION.**

Learn more & register:

www.africangreenindustries.com



#AGIS2026



TOGETHER FOR A SUSTAINABLE AFRICA.

Why Namibia Must Accelerate EV Shift

For decades, our transportation sector has been entirely dependent on the volatile fluctuations of global oil markets. Every spike in international crude oil prices reverberates instantly through our local economy, driving up inflation, increasing the cost of basic commodities, and placing a heavy financial burden on everyday Namibian consumers.

The recent move by government to explore a nationwide electric vehicle (EV) charging network signals the beginning of a vital transition. By aggressively stepping up the adoption of electric mobility and pairing it with our abundant renewable energy resources, Namibia can decouple its transport sector from foreign oil and fuel a sustainable economic future.

Currently, Namibia's EV market is in its absolute infancy, with an estimated 200 electric vehicles navigating our roads. To some, the government's updated Nationally Determined Contribution (NDC) target—which aims to replace 10,000 internal combustion engine vehicles with EVs by 2030—appears overly ambitious or even unrealistic. Yet, dismissing this goal as a pipe

dream ignores both the pressing economic necessity and the massive strategic advantages at our disposal. We must view this target not as an optional environmental milestone, but as an urgent economic imperative.

As Minister Veikko Nekundi rightly pointed out to Parliament, the rising uptake of EVs in Windhoek and the central regions makes it necessary to consider a countrywide charging network.

Notably, local passenger transportation and ride-hailing companies like LEFA have integrated EVs into 11% of their passenger fleets, proving that electric mobility is viable in the real world today.

What makes Namibia uniquely positioned to win this transition is our unparalleled abundance of solar and wind energy. Charging an electric vehicle on a grid powered by imported fossil fuels only shifts the pollution from the tailpipe to the power plant.

Namibia, however, can bypass this entirely. By utilising our abundant sunlight and wind to generate clean electricity, we can ensure that our transport sector is fueled entirely by home-

grown, localised energy.

Instead of bleeding billions of dollars out of the country to import petroleum, we can keep that capital circulating within our own borders, empowering local utilities and independent power producers.

Crucially, Namibia's current electrical grid has the capacity to comfortably absorb this demand without compromising stability.

To truly unlock this green future, we must confront three structural hurdles that currently stall public adoption: range anxiety, infrastructure deficits, and high upfront capital costs. The vast geographic distances between Namibian towns mean that a driver cannot rely on Windhoek-centric infrastructure.

An EV driver must feel as confident traveling to Oshakati or Walvis Bay as they do driving across the capital.

Happy Reading!

Editor

Editor@etangonam.com

WhatsApp: +264 81 626 0010



GLOBE COMMUNICATIONS NAMIBIA

Reg. No. 2007/3268

VAT No. 4530957015

OFFICIAL MEDIA PARTNER OF



Contributors

Publisher

Globe Communications Namibia cc

Editor

Tabby Moyo

Graphic Design & Layout

Globe Communications Namibia

Advertising

Globe Communications Namibia

Distribution

Globe Communications Namibia

TABLE OF CONTENTS

Namibia wants local manufacture of solar panels, electrolyzers & turbines	4-5
Government looks at nationwide EV charging network rollout	6-7
EU commits to support Namibia's green industrialisation agenda	8-9
Inaugural African Green Industries Summit 2026 set for Swakopmund	11
Building capacity through experience: 100MW Sores Gaib experience	12-13
Greenlight for Tsumeb N\$600m 20 MW Solar PV Park	14
Green Industries Council to Steer Green Industrialisation agenda	15
Botswana breaks ground on 500MW Maun solar-plus-storage project	16
Solar, wind power now cheaper than fossil fuels – IRENA	17
Clean Energy as a pathway to inclusive development	18-19
Hyphen, AHK and GIZ convene supplier development workshop	20
Africa makes huge strides in solar value chain	21
Europe's push for hydrogen diverts solar and wind potential from Africa	23-25
Zambia's Nambala deal signals a shift in how Africa thinks about solar	26

COVER PICTURE



RENEWABLE INDUSTRIALISATION PACT: EU's Global Gateway initiative offers a platform to unlock the scale of investment required to realise Namibia's green industrialisation ambitions. First launched in 2022, the partnership on sustainable raw materials and green hydrogen has now been extended for the 2026–2030 period through signatures by Ambassador Kaire Mbuende, Director General of the NPC, EU Commissioner for Environment, Jessika Roswall, and Commissioner of Mining at the Ministry of Industries, Mines and Energy, Isabella Chirchir. Photo: Christian Stiebahl

Etango Magazine is produced by Globe Communications Namibia cc,
Unit 9, Tal Terrace, Wecke Street, P.O Box 41113, Windhoek, Namibia

Contact: +264 81 626 0010

Email: globe@afol.com.na

Copyright ©

All material – articles, photos or graphics published in this magazine are copyrighted to Globe Communications Namibia, the Publishers, and may not be reproduced or reused by anyone without obtaining prior written permission from Globe Communications.

Namibia Bent on Fully Exploiting Renewable Energy Resources to Build Modern Industrial Base

...Pushes for Local Manufacture of Solar Panels, Electrolysers and Wind Turbines

Namibia is leaving no stone unturned in its quest to fully utilise its renewable energy resources, strategic geographic position, ports and mineral endowments to build a modern industrial base for the country.

National Planning Commission (NPC) Director General Ambassador Kaire Mbuende told the World Hydrogen Summit 2026 held in Rotterdam, the Netherlands, in May, that Namibia regards its remarkable renewable energy resources which will power the production of green hydrogen as a platform for industrial transformation.

“We don’t look at green hydrogen as a narrow energy project. It is at the core of our development agenda as a new frontier of growth and development. Our aspiration is to create 30,000 green jobs by 2030. Our intention is to build domestic productive capacity as we at the same time are contributing to global decarbonisation,” Mbuende told the summit.

He said Namibia was inviting investors to produce green molecules in Namibia.

“We have identified priority investable industries including solar panel manufacturing, electrolyser manufacturing, wind turbine manufacturing, lithium refining, rare earth elements refining, flat glass production, synthetic fuels production and hot briquetted iron production,” Mbuende said.

Namibia has been deliberate in the promotion of this sector. In 2022, the country developed the Green Hydrogen and Derivatives Strategy, setting out a vision to become a global player in green hydrogen production and export. In 2024, Namibia launched the Green Industrialisation Blueprint, aligning hydrogen with broader industrial policy and investment-ready zones.

The Namibia Green Hydrogen Programme and the Green Industries Council have been established to support the emerging ecosystem and promote investor confidence and to lead green industrialisation, respectively.



GREEN AGENDA: National Planning Commission Director General Ambassador Kaire Mbuende (centre) represented Namibia at the World Hydrogen Summit in Rotterdam, accompanied by Dr Alfredo T. Hengari, Head of Mission to the European Union and Joseph Mukendwa, Acting Head of the Namibia Green Hydrogen Programme.

Headwinds Worries

Although determined to emerge as a major player in the global green hydrogen economy, Mbuende said Namibia acknowledged the headwinds facing the global hydrogen industry.

“Costs remain high. Demand signals are not yet sufficiently firm. Offtake arrangements are still developing. Global standards, certification systems and regulatory frameworks are still evolving. Financing remains challenging, particularly for first-of-a-kind projects in emerging markets. This is why we believe

that market creation is as important as project development,” Mbuende said.

In his presentation during the Namibia Country Spotlight Session on the sidelines of the World Hydrogen Summit 2026, which brought together key industry players, Mbuende pleaded for more collaboration and investments from the European partners, “to help turn our policy direction into practical projects, bankable investments and industrial outcomes”.

“Let me state the obvious. We as a country offer a stable and credible platform for cooperation in renewable energy, green hydrogen, ports, logistics, water, engineering, industrial services, mineral beneficiation, project development and trade facilitation. We also offer a growing pipeline of green industrial opportunities, supported by clear national planning frameworks, political stability, strategic infrastructure, abundant renewable resources and a Government committed to de-risking early-stage sectors. Our invitation is therefore an open call for serious collaboration that can move Namibia’s green industrialisation agenda from ambition to implementation” the NPC DG said.

Mbuende said in its quest to become an industrialised and prosperous country by 2030, Namibia seeks to quickly move away from the reliance on primary sectors and the export of raw or semi-processed resources that do not create welfare for the majority of Namibians.

“For Namibia, green hydrogen is an industrialisation instrument that will allow us to connect our world-class solar and wind resources to the needs of a decarbonising global economy. It gives us an opportunity to produce green molecules, that can be used to process minerals, support green iron, enable clean ammonia and fertiliser production, develop manufacturing hubs, strengthen logistics corridors and develop appropriate skills,” said Mbuende.

For Namibia, The DG said, green industrialisation is a growth pathway that connects Namibia’s domestic priorities with regional and global agendas. He acknowledged that the Namibia’s ambitions cannot be achieved by the country alone. “Green industrialisation is capital-intensive. It requires technology, markets, standards, infrastructure, finance, skills, credible offtake arrangements and long-term cooperation,” Mbuende said.



BUILDING LOCAL CAPACITY: Namibia has identified priority investable industries including solar panel and wind turbine manufacturing.



Development Bank of Namibia
Expect more.

Energy Powers Development

- Energy is a key driver of economic growth
- DBN finances energy generation and distribution projects

+264 61 290 8111 | info@dbn.com.na | [Facebook](#) [Twitter](#) [LinkedIn](#) [YouTube](#)



E-MOBILITY: A charging station was installed at the City of Windhoek's head office last year, making it easily accessible for monitoring usage trends.

Government Looks at Nationwide EV Charging Network Rollout

With the rapid increase in the uptake of electric vehicles (EVs) in Namibia, mainly due to the escalating fuel prices, government is now moving to install EV charging stations at strategic locations nationwide.

The roll out of the EV charging network could take advantage of the country's excellent renewable energy resources.

Namibia's EV market is still in its infancy, with an estimated 200 vehicles currently on the roads. The country's updated Nationally Determined Contribution (NDC) aims to replace 10,000 internal combustion vehicles with EVs by 2030, although this target has been dismissed as overly ambitious.

The Ministry of Works and Transport has launched a pilot EV charging station at its headquarters in Windhoek.

Minister of Works and Transport Veikko Nekundi told Parliament that the number of EVs on use in Namibia was increasing particularly



Minister of Works and Transport Veikko Nekundi

in the Windhoek and central regions. This necessitated the need for a countrywide EV charging network.

Nekundi said the pilot charging station at the Ministry was designed and installed by the Ministry's in-house engineers and will serve as a test centre to inform the possible rollout of EV charging facilities across the country.

He said a future national charging network could support the adoption of electric vehicles within the government's fleet while also potentially serving the wider public.

The United Nations head office in Windhoek and the City of Windhoek have since installed EV charging stations. A commercial fast-charging station has also been installed at Grove Mall in Windhoek, with one also at Arandis.

Nekundi said the government pilot project forms part of broader efforts to prepare Namibia's transport sector for the transition to cleaner and more sustainable mobility solutions.

“As custodian of government-invested properties, the ministry is suitably positioned to develop an extensive charging-station network nationwide, with a view to catering for a future electric vehicle government fleet and possibly the public at large,” he said.

Government employees who own electric vehicles and wish to use the charging facility have been urged to register with the Office of the Director of Capital Project Management at the Ministry’s headquarters. Charging will be free of charge during the testing period.

Some Members of Parliament had raised questions about the installation at the Ministry of Works and Transport, seeking clarity on costs, coordination with other ministries and the impact on the national grid.

The City of Windhoek launched its first public electric vehicle charging port during the annual Zero Emissions Week in September last year.

The EV charging port was donated by TESLA Energy Solutions, a company specialising in sustainable energy technologies, and is valued at N\$120 000.

The charging station was installed at the City of Windhoek’s head office, making it easily accessible for monitoring usage trends. The

installation will also contribute to ongoing research on the integration of electric vehicles into Namibia’s transport system.

The then Windhoek Mayor Ndesihafela Larandja said this milestone reflected the city’s commitment to climate-resilient development and expanding electric mobility infrastructure.

TESLA’s contribution does not only support the city’s transition to more sustainable energy sources, but also aligns with its commitment to advancing climate resilience and promoting green technologies within the urban environment.

TESLA Energy Solutions CEO Elron Awase said the EV charger donated to the City of Windhoek is a 12V, 32-kilowatt unit, capable of charging different types of vehicles. Depending on the vehicle and charger type, a full charge costs about N\$120 and takes between 30 minutes and seven hours.

LEFA co-founder Kalipi Aluvilu said since the start of LEFA’s electrified mobility pilot project in 2024, 11% of the passenger transportation company’s fleet is now made up of EVs. He said it was important for Namibian companies and institutions to invest in EV mobility infrastructure as well as offer incentives that are aimed at promoting EV mobility.

Reaching the 10,000 EV mark is expected to require an additional 17 to 20 GWh of electricity annually (extrapolated from energy targets). Experts note that Namibia’s current grid can comfortably absorb this demand.

Local auto and energy experts have blamed the sluggish uptake of EVs in Namibia on three key hurdles:

1)Range: High distance gaps between Namibian towns make long-distance travel difficult.

2)Infrastructure: Public fast-charging infrastructure is still in its infancy.

3) Price: The high upfront capital cost of electric vehicles remains prohibitive for everyday consumers. High customs duties (15% to 30%) and a 15% VAT further drive up import costs.

Namibia has also established an EV policy with a regulatory framework for electric vehicle charging infrastructure.

The Electricity Control Board (ECB) has approved a framework to govern the installation and operation of EV charging stations, which was endorsed in August 2024.

The framework aims to enhance sustainable transportation and includes guidelines for pricing and resale mechanisms for EV charging stations.



QUICK-CHARGE: Shoppers at Windhoek’s Grove Mall can make use of the EV fast-charging station that was installed at the lower-level parking deck in 2022.



CRITICAL MATERIALS VALUE CHAINS: The Namibia window of the EU Pan-African Support to Geological Sciences and Technology (PanAfGeo+) programme, together with the German Federal Institute for Geosciences and Natural Resources (BGR), will support implementation of the critical raw materials value chains leg of the EU–Namibia partnership through coordination, knowledge management, and improved access to geoscience-related equipment.

Namibia–EU Business Forum: *Europe Commits to Support Namibia's Green Industrialisation Agenda*

The 2nd Namibia–EU Business Forum took place in Windhoek in May, with European countries reaffirming their continued support to Namibia's green industrialisation agenda.

European Union Ambassador to Namibia, Ana Beatriz Martins, said as the country was positioning itself as a global leader in green industrialisation, the opportunities for Namibia in the emerging industries cannot be understated.

“Because critical raw materials, renewable energies, and green industrial products will shape the global economy for decades to come. Namibia currently has seven to eight large-scale green hydrogen projects in the pipeline, representing an estimated €20 billion (about N\$378 billion) in investment potential. What we are witnessing is not simply the emergence

of a new sector, but the foundations of a new industrial future,” she said.

Martins said the EU's Global Gateway initiative offers a powerful platform to deepen Namibia's transformation and help unlock the scale of investment required to realise the green industrialisation ambitions.

“Namibia's ambition is not simply to export raw materials, but to move decisively towards greater industrialisation, local processing, and value addition. This is the direction of the future — creating more value locally, generating skilled jobs, strengthening industrial capacity, and ensuring that Namibia captures a greater share of global value chains. Achieving this will require investment, technology transfer, innovation, and strong partnerships between governments and the private sector,” the EU Ambassador said.

The 2nd Namibia–EU Business Forum, which had over 1 000 participants (both in person and online), placed emphasis on green industrialisation, focusing on sustainable critical raw materials value chains, green hydrogen and renewable energies, agribusiness, automotive industry, and the cultural and creative industries, which are key sectors for promoting local value addition, innovation, and investment.

Over three days, the Forum translated the Namibia–EU partnership into concrete action through discussions.

Ambassador Martins said the Forum demonstrated the growing momentum of the Namibia–EU partnership and the shared commitment to creating jobs, expanding industries, and building sustainable economic growth.

The Forum also reflected on the success of the EU-SADC Economic Partnership Agreement (EPA), which marks its tenth anniversary since its signing in June 2016.

Over the past decade, Namibia-EU trade has doubled to N\$17.6 billion, with exports ranging from mining and fisheries to agriculture, beef and charcoal. Preliminary estimates show that approximately 46,762 Namibian jobs are directly linked to exports of goods to the EU alone. This does not yet include services such as tourism, which support thousands of additional jobs around the country.

In addition, proposed cooperation between European and Namibian partners in ports and rail could unlock significant new investment and strengthen Namibia's position as a regional trade gateway.

The Forum concluded with several important announcements and signing ceremonies aimed at supporting Namibia's long-term economic transformation and green industrial ambitions:

- **The “Making Lüderitz Town Council Fit for the Future”** project will help prepare the town of Lüderitz for future investment, economic expansion and urban growth.
- The project will be implemented by the Association of Netherlands Municipalities (VNG) in partnership with the Lüderitz Town Council, with an EU contribution of €1.5 million (N\$29 million) and Netherlands contribution of €308.000 over two and a half years.
- **The “Support to the Namibian Standards Institute”** project will strengthen standards development for emerging green industries and enhance Namibia's industrial competitiveness. The initiative will be implemented by the German National Metrology Institute (PTB) in partnership with the Namibian Standards Institution (NSI), with a total budget of €750,000 (N\$14.5 million) over two years.
- **The Namibia window of the EU Pan-African Support to Geological Sciences and Technology (PanAfGeo+)** programme, together with the German Federal Institute for Geosciences and Natural Resources (BGR), will support implementation of the critical raw materials value chains leg of the EU-Namibia partnership through coordination, knowledge management, and improved access to geoscience-related equipment.
- The project carries a budget of €1.8 million (N\$35 million) over two years.
- **The National Critical Raw Materials Strategy** project will support the development of Namibia's National Critical Raw Materials Strategy, including policy, legal, institutional and investment frameworks for exploration, beneficiation and circular economy integration. The project has a budget of €386,860 (N\$7.5 million) over 12 months.
- The Forum also announced plans for the upcoming **Green Industries Summit**, scheduled to take place in Swakopmund in September 2026. The Summit is expected to further position Namibia as one of Africa's leading destinations for green industrial investment and strategic partnerships.

The successful conclusion of the 2nd Namibia-EU Business Forum marks another major step forward in strengthening Namibia-EU cooperation, expanding trade and investment ties, and positioning Namibia as a leading destination for sustainable investment, green industrialisation and long-term economic growth in Africa.



GREEN PACT: Amb. Kaire Mbuende, Director General of the NPC, Jessika Roswall, EU Commissioner for Environment, and Isabella Chirchir, Commissioner of Mining at the Ministry of Industries, Mines and Energy.



Light
Systems
Namibia

LIGHTS SYSTEMS NAMIBIA PROVIDES

SOLAR POWER SYSTEMS



**FOR YOUR
BUSINESS**

**FOR YOUR
HOUSE**



-  **REDUCE EXPENSIVE GRID POWER**
-  **LET'S GO SOLAR**
-  **SAVE WITH SOLAR**

CONTACT DETAILS:
061 555 000 / 085 288 6222
www.lsn.com.na

Inaugural African Green Industries Summit 2026 Set for Swakopmund



INDUSTRIALISATION AGENDA: AGIS 2026 is expected to bring together policymakers, investors, industry leaders, and development partners from across Africa and beyond to engage in dialogue, investment discussions, and partnership development. Pictured at the launch of AGIS 2026 in Windhoek are (from left) Tangeni Tshivute (NamPower), Joseph Mukendwa (NGHP), Gaudentia Kröhne (Deputy Minister of MIME), William Shilamba (NEA) and Jessica Hauuanga (NIPDB).

The first African Green Industries Summit (AGIS) is scheduled to take place at the coastal town of Swakopmund from 9 to 10 September 2026, under the theme “Powering African Industries for Sustainable Development.”

The summit, hosted by NEA Consulting in collaboration with key government and industry stakeholders, builds on the success of previous platforms such as the Global African Hydrogen summit — which played a pivotal role in establishing Namibia’s green credentials internationally — while expanding focus to broader green industrialisation, including renewable energy, infrastructure, and sustainable manufacturing.

AGIS 2026 is expected to bring together policymakers, investors, industry leaders, and development partners from across Africa and beyond to engage in high-level dialogue, investment discussions, and partnership development. The summit programme will include leadership roundtables, project pitching sessions, technical seminars, business matchmaking opportunities, and site visits, aimed at translating policy into tangible industrial development outcomes.

Speaking at the media launch of the summit,

Deputy Minister of Industries, Mines and Energy, Gaudentia Kröhne, emphasized the importance of the summit in advancing Namibia’s industrialisation agenda and supporting Africa’s transition towards a sustainable, green economy.

She said the summit will play a significant role in championing Namibia’s wider industrialisation agenda and for Africa’s collective green transition.

“This summit did not emerge in a vacuum. It builds on a journey that began with the first major effort to convene local, continental and global interest around Namibia’s green industrial potential in 2024, and which gained further substance through the Global African Hydrogen Summit 2025 held in Windhoek. This year, we are expecting about 600 delegates (at AGIS), over 50 confirmed speakers, and more platforms that will be confirmed later,” said the Deputy Minister.

She said the AGIS represents an evolution from sector-specific dialogue toward a broader agenda covering renewable energy, green hydrogen, infrastructure, critical minerals and sustainable manufacturing.

“That broadening is timely and necessary because Namibia’s ambition is not to build one

isolated sector, but to catalyse an industrial ecosystem,” she said.

Acting Chief Executive Officer of the Namibia Investment Promotion and Development Board (NIPDB), Jessica Hauuanga, reaffirmed Namibia’s ambition to position itself as a leading green industrial hub on the African continent.

She highlighted the role of strategic partnerships, noting that collaboration with organisations such as NEA is essential in delivering platforms that attract investment, promote local enterprise participation, and drive inclusive economic growth.

Joseph Mukendwa, Interim Head of Programme of the Namibia Green Hydrogen Programme, described AGIS 2026 as an evolution beyond the hydrogen sector, underscoring that Namibia’s national objective is to use renewable energy and green hydrogen as enablers of industrialisation, value addition, infrastructure development, and long-term economic transformation.

He noted that 78 projects and developers have already been shortlisted under Namibia’s Sectoral Transformation Investment Plan, spanning clean energy, enabling infrastructure, industrial decarbonisation, circular economy, and bio-economy.



HANDS ON: The Light Systems Namibia team busy at the 100MW Sores | Gaib Solar Power Plant site.

Building Capacity Through Experience:

LSN's Journey on the 100MW Sores | Gaib Power Plant

By Paulus Mulunga

Namibia's renewable energy sector is entering a transformative era. As the country accelerates its transition toward cleaner energy sources and positions itself as a future green hydrogen hub, large-scale renewable energy projects are becoming increasingly important in developing local technical capacity and industrial expertise. One such landmark development is the 100MW Sores | Gaib Solar Power Plant near Rosh Pinah — currently Namibia's largest solar PV project under construction.

For Lights Systems Namibia (LSN), participation in this project represents far more than just another contract. It marks a significant milestone in the company's growth journey and a major step forward in the development of local expertise in utility-scale renewable energy infrastructure.

LSN was subcontracted by China Jiangxi International Economic and Technical Cooperation Namibia Ltd to perform tracking system and PV module installation works on the project. The contract scope included Engineering, Procurement and Construction (EPC)-related installation



Paulus Mulunga

activities associated with the solar tracking systems and PV modules.

While LSN has previously been involved in the refurbishment of two smaller 5MW solar plants, the Sores | Gaib project introduced the company to an entirely different level

of technical execution, project coordination, and operational discipline. The scale, complexity, and standards associated with a 100MW utility-scale solar park have provided invaluable experience that cannot be replicated on smaller projects.

One of the most important lessons gained from the project has been the significance of comprehensive health, safety, security, and environmental (HSSE) management systems. Utility-scale energy projects operate under stringent safety requirements, and the Sores | Gaib Solar Power Plant is no exception. From the beginning of the project, LSN was exposed to the process of developing and implementing detailed safety files, risk assessments, method statements, personnel management procedures, and compliance documentation.

This experience has fundamentally strengthened the company's understanding of how critical health and safety management is within large infrastructure projects. On projects of this magnitude, safety is not merely a compliance requirement — it becomes part of the project culture. Every activity must be planned carefully, hazards identified proactively, and mitigation measures implemented systematically before work can proceed.



For many local contractors, one of the biggest challenges when transitioning from small commercial installations to utility-scale projects is adapting to the level of documentation and operational structure required. Through the Sores |Gaib project, LSN gained first-hand experience in aligning its internal systems with international EPC standards and project management protocols. This included workforce coordination, reporting systems, quality control processes, toolbox talks, safety inductions, inspection procedures, and detailed site planning.

The project also exposed the company to the realities of managing large teams and operating within highly coordinated construction schedules. Utility-scale projects involve multiple contractors, suppliers, engineers, consultants, and stakeholders working simultaneously under strict timelines. This requires clear communication, efficient resource allocation, and disciplined execution to avoid delays and maintain productivity.

Working within such an environment has significantly improved LSN's project management capabilities. The company has developed a deeper understanding of planning methodologies, construction sequencing, logistics coordination, and workforce supervision at scale. These are critical skills that will be essential as Namibia continues to attract larger renewable energy and green industrial projects.

Another important aspect of the project has been exposure to advanced solar tracking systems. Unlike smaller fixed-tilt installations, large utility-scale solar parks increasingly rely on tracking technology to optimize energy

yield and improve overall plant performance. Installing and working with these systems has enhanced the technical competence of LSN's installation teams and provided practical experience with technologies commonly used in international utility-scale solar developments.

Beyond technical skills, the project has reinforced the importance of professionalism, accountability, and compliance in the renewable energy sector. International developers and financiers expect projects to meet high standards in quality assurance, environmental management, worker safety, and execution discipline. Participation in the Sores |Gaib Solar Power Plant has therefore helped position LSN to better understand the expectations associated with globally financed energy infrastructure projects.

Importantly, the knowledge and experience gained from this project extends beyond solar PV alone. Namibia's emerging green hydrogen industry will require significant renewable energy infrastructure, including large-scale solar and wind generation facilities, battery energy storage systems (BESS), substations, transmission infrastructure, and industrial support services. The ability of local companies to participate meaningfully in these projects will depend heavily on whether they possess the technical competence and project execution experience required by international developers.

For LSN, the Sores |Gaib Solar Power Plant has become an important stepping stone toward that future. The project has demonstrated that local Namibian companies can contribute meaningfully to large-scale

renewable energy developments when given the opportunity. More importantly, it has shown that local participation creates long-term value through skills transfer, operational exposure, and capacity development.

As Namibia continues to position itself as a leader in renewable energy and green hydrogen development in Africa, projects such as Sores-Gaib play a crucial role in preparing local companies for future participation in the sector. The experience gained today will determine the competitiveness of Namibian companies tomorrow.

LSN remains committed to growing its technical expertise, strengthening its operational systems, and contributing toward Namibia's renewable energy transition. The lessons learned on the 100MW Sores-Gaib Solar Power Plant will continue to shape the company's growth trajectory for years to come.

More importantly, the project serves as a reminder that renewable energy development is not only about generating electricity — it is also about developing local industries, empowering local contractors, and building a sustainable skills base that can support Namibia's long-term industrial ambitions.

The future of Namibia's energy sector will depend not only on the projects being developed, but also on the local capacity being built alongside them. For Lights Systems Namibia, the journey at Sores |Gaib is only the beginning.

****Paulus Mulunga is Founder and Managing Director of Light Systems Namibia.***

Greenlight for Tsumeb N\$600m 20 MW Solar PV Park

The northern town of Tsumeb will soon join the solar bandwagon with the construction of a 20 MW photovoltaic (PV) solar park after the Ministry of Industries, Mines and Energy approved the project.

The solar PV plant, to cost over N\$600 million, will be developed by Massaus and Titan Energy Solutions. It will supply power to the Tsumeb smelter operations of Chinese mining giant Sinomine Resource Group.

Electricity Control Board (ECB) Chief Executive Officer Robert Kahimise confirmed that the Ministry of Industries, Mines and Energy approved the licence for the power plant on 26 January 2026 on recommendation from the regulator.



SUSTAINABLE ENERGY: The solar PV plant to be developed by Massaus and Titan Energy Solutions will supply power to the Tsumeb smelter operations of Chinese mining giant Sinomine Resource Group.

He said the ECB issued the generation licence Massaus and Titan Energy Solutions 12 February 2026. The final licence approved a total installed capacity of 23.03 MWp, slightly larger than the initial 20 MW outlined in the environmental filing.

The solar park will cover 40 hectares and will be located within the Dundee Precious Metals Tsumeb (DPMT) licence area in the

Oshikoto Region. It will use approximately 130 000 solar panels to reduce reliance on conventional, high-load energy and feed surplus power into the national grid.

The project is expected to support Namibia's renewable-energy commitments by increasing clean-energy availability and reducing dependence on imported or carbon-intensive electricity.



We offer:

- MSB wheeling anywhere in the country
- No upfront CAPEX required
- Flexible short to medium-term PPAs
- Local support for permitting & MSB registration

**capacity
available for
new customers.**

You are a large power consumer, connected to the Namibian distribution or transmission network and wish to reduce your electricity bill?

contact.

ttorne@innosun.org

**Receive a custom-made offer
designed for your business needs.**



New Green Industries Council to Steer Namibia's Green Industrialisation Agenda



GREEN IRON: The Hylron Oshivela project near Arandis, Africa's first industrial-scale, carbon-neutral green iron production facility was inaugurated in April 2025.

Cabinet has approved the establishment of a new Green Industries Council which will replace the Green Hydrogen Council whose term officially ended in February 2025.

The Green Industries Council will oversee and guide Namibia's broader green industrialisation agenda and will focus on policy coordination, institutional alignment and investment priorities aimed at accelerating industrialisation, economic diversification and job creation.

Government spokesperson, Information and Communication Technology Minister, Emma Theofelus, said the new body marks a shift from the narrower green hydrogen focus towards a broader industrial development strategy aimed at positioning Namibia to benefit from emerging green industries.

The council will be chaired by the Director General of the National Planning Commission and its members will include representatives from the ministries of Finance, Industries, Mines and Energy, Agriculture, Fisheries, Water and Land Reform, Environment and Tourism, International Relations and Trade, and Urban and Rural Development. The Office of the Attorney General and the Bank of Namibia will also be represented on the council.

At the launch of the African Green Industries

Summit (AGIS) in May, interim head of the Namibia Green Hydrogen Programme (NGHP), Joseph Mukendwa, said Namibia already has projects demonstrating green iron production, green hydrogen mobility, green ammonia and fertiliser potential, renewable energy applications, and industrial decarbonisation pathways.

"Our national objective is to use renewable energy, green hydrogen and its derivatives as enablers of industrialisation, value addition, infrastructure development, skills formation and long-term economic transformation. This means connecting renewable energy to productive sectors, linking green hydrogen to minerals beneficiation, supporting low-carbon manufacturing, strengthening logistics and port infrastructure, and creating space for local enterprises and communities to participate in emerging value chains," said Mukendwa.

Under the leadership of the National Planning Commission, Mukendwa said Namibia is currently preparing its Sectoral Transformation Investment Plan (STIP) through the Climate Investment Funds Industry Decarbonisation Programme. The intention is to submit the final investment plan around October 2026.

"This process is designed to help Namibia unlock catalytic concessional finance and

crowd in further support from development finance institutions, multilateral development banks and private investors. However, the STIP is not only a financing document. It is a national project pipeline-building process. It is helping us identify which projects, infrastructure enablers, industrial opportunities and policy measures can move Namibia from planning into implementation," said Mukendwa.

Through the process, 78 projects and developers have been shortlisted for further consideration and engagement. These projects fall under strategic themes such as clean energy and industrial power anchors; enabling infrastructure including grid, storage and system integration; industrial system decarbonisation and value addition; circular economy and low-carbon manufacturing; and bio-economy, agriculture and climate innovation.

"This is a strong indication that Namibia's green industrialisation opportunity is broader than one project or one sector. It cuts across energy, mining, agriculture, logistics, manufacturing, water, transport and technology. It also confirms that there is growing interest from project sponsors, local enterprises and development partners to participate in this transition," Mukendwa said.



POWER LEAP: Botswana's President Duma Boko with Abdulsalam bin Mohammed al Murshidi, Chairman of Oman Investment Authority, during the groundbreaking for the Maun solar plant.

Botswana Breaks Ground on 500MW Maun Solar-Plus-Storage Project

Work has begun on the 500 megawatt (MW) Maun solar-plus-storage project in Botswana, which will be a cornerstone of the country's plan to reach 1.5GW of operational renewable energy capacity by the end of the decade.

The Maun solar project will be tied to 500 MWh of battery storage in northeastern Botswana, making it one of the largest projects of its kind in southern Africa. The government expects the project to begin commercial operations in 2029.

A 30-year power purchase agreement is in place between project developers Okavango Solar, wholly-owned by Oman's NAQAA Sustainable Energy LLC, and Botswana Power Corporation. The project will be operated by Okavango Solar, a subsidiary of renewable energy company O-Green, which is itself owned by the Sultanate of Oman.

The start of construction at the project is a significant milestone for Botswana, which is seeking to make rapid changes to its energy mix. According to government figures, renewable energy currently accounts for 8% of the total generation mix, but the government's latest Integrated Resource Plan aims to increase this to 50% by 2030.

"This is not merely a project, it is a clear statement that Botswana is poised to become a regional energy hub," said Botswana President Duma Boko. "This will bring to light our broad ambitions of being a regional hub for solar energy generation."

The project will be owned and operated by a combination of companies that are a part of the Botswanan and Omani governments. The Botswana government described the ownership structure as a "partnership" between itself and the Sultanate of Oman, where the project would be "executed" by the Botswana Power Corporation, a state-owned utility.

David Kgoboko, Botswana Power Corporation CEO, said the Maun project will play a key role in improving Botswana's energy security.

The most recent figures from the World Bank show that energy imports accounted for around 30% of Botswana's total electricity usage in the year to the third quarter of 2024, and this trend has increased more recently. Figures from Statistics Botswana show a 40.8% year-on-year increase in electricity imports between the first quarter of 2024 and 2025.

The World Bank also described the country's

energy generation as "increasingly unreliable", as, in 2024, coal accounted for 97% of the country's electricity generation, with the majority coming from the 600MW Morupule B coal plant, which "continues to underperform".

Adding significant capacity of domestic electricity generation, through the form of a solar-plus-storage project, is therefore a priority for Botswana.

"The project will significantly enhance security of supply and will reduce our carbon footprint as a country, optimise the corporation's generation costs through displacement of expensive power imports and will ultimately position Botswana as a net exporter of electricity in the region," said Kgoboko.

The government's latest update adds that Botswana's utility-scale solar market has been progressing via two 100 MW-plus projects, the already-operational Mmadinare project, and the Jwaneng project, which it says is nearing full commissioning.

Botswana currently has 181.5 MW of operational solar, according to the Africa Solar Industry Association's (AFSIA) project database.

Solar, Wind Power Now Cheaper Than Fossil Fuels – IRENA

Renewable energy sources such as solar and wind power, when combined with battery storage systems, are now capable of delivering reliable electricity around the clock at costs lower than fossil fuels.

A latest new report by the International Renewable Energy Agency (IRENA), titled '24/7 Renewables: The Economics of Firm Solar and Wind', has highlighted this major turning point in the global energy sector.

The IRENA report findings challenge the long-standing belief that renewable energy is too unreliable to support modern economies without backup from coal or natural gas plants.

The report explains that "firm" renewable energy refers to electricity that remains available even during periods when the sun is not shining or the wind is not blowing. This is made possible through advanced battery storage systems that store excess electricity generated during sunny or windy periods and release it later when demand increases. In regions with strong solar and wind resources, these hybrid renewable systems are now capable of generating electricity at costs ranging between US\$54 (N\$877) and US\$82 (N\$1,332) per megawatt-hour.

IRENA compares these costs with traditional fossil fuel power generation. New coal-fired power plants in China currently produce electricity at costs between US\$70 (N\$1,137)

and US\$85 (N\$1,381) per megawatt-hour, while new gas-fired plants globally often exceed US\$100 (N\$1,625) per megawatt-hour. This comparison clearly shows that renewable energy is becoming not only cleaner but also more economical than conventional energy sources.

IRENA noted that the rapid decline in renewable energy costs has been driven by major technological improvements over the past decade. Since 2010, the installation cost of solar energy projects has fallen by 87%, while onshore wind power costs have dropped by 55%.

Battery storage technology has seen the most dramatic change, with costs declining by 93% during the same period. These sharp reductions have made renewable energy projects increasingly attractive for utilities, industries, and governments worldwide.

The IRENA report also highlighted the growing importance of reliable, clean power for energy-intensive industries. Large-scale facilities such as data centers and artificial intelligence operations require uninterrupted electricity supplies to maintain operations. Hybrid renewable systems with battery storage are emerging as a strong solution for such industries because they can provide stable and continuous power while reducing energy costs and carbon emissions.

Beyond financial benefits, the report emphasized the strategic importance of

renewable energy. Global energy markets have experienced major disruptions in recent years due to geopolitical tensions, conflicts, and fuel price volatility. According to IRENA, renewable energy offers countries a more secure and independent energy supply because solar and wind resources are locally available and less exposed to international market shocks.

Another advantage highlighted in the report is the faster construction timeline of renewable energy projects. Most solar and wind projects can become operational within two years, while traditional fossil fuel plants often require much longer periods for planning, approvals, and construction.

Looking ahead, IRENA predicts that the cost of firm renewable energy systems could decline by another 30% by 2030 and nearly 40% by 2035.

The agency believes these falling costs will help industries such as steel manufacturing and shipping transition toward cleaner fuels and low-carbon operations.

IRENA has urged governments around the world to accelerate the transition by simplifying project approvals, modernising electricity grids, and increasing investment in clean energy infrastructure. According to the report, 24/7 renewable energy is now becoming the most affordable, reliable, and secure pathway for the future global energy system.



STABLE POWER: Hybrid renewable systems with battery storage are emerging as a strong solution for energy-intensive industries that need reliable and clean power, such as data centers.



LEADING BY EXAMPLE: The United Nations Namibia House has adopted solar power through the installation of a 104kWp photovoltaic system.

Lighting Up Namibia:

Clean Energy as a Pathway to Inclusive Development

By Christian Anteneh Demissie

January 26 was the International Day of Clean Energy, celebrated worldwide to raise awareness and mobilising action for a just and inclusive transition to clean energy for the benefit of people and the planet.

For Namibia, a country rich with untapped world-class renewable energy resources, the moment offers an opportunity to reflect on the country's promising green future and outlining a strategy to address the energy access challenge.

Namibia's Rising Energy Influence

As the world moves forward with restructuring, fossil fuel decline, and renewable technologies rising. Namibia's offshore oil discoveries open a door to new strategic and consideration, balancing short-term financial prosperity with long-term green development. The decisions made today will shape the future of the country in international partnerships, attracting investment, and access to technology.

The geopolitical is not limited to fossil fuel, perhaps touch on clean energy supply chain as



Christian Demissie

well, including investment in critical minerals, renewable technologies advancement, and green hydrogen development increase global influence. Namibia's growing contribution to green hydrogen has the potential to increase its geopolitical significance both in Africa and beyond.

Clean Energy for Social Development

Despite its natural advantage and progress toward clean energy, Namibia faces energy poverty. Currently, only 56% of Namibia's population has access to electricity, with 75% living in urban areas, 35% in rural areas, and the remaining 44% still living in the dark. Many rural communities remain unconnected due to dispersed settlements and costly grid expansion.

With Namibia importing up to 60% of its electricity, the country is vulnerable to regional supply shocks, and energy poverty continues to limit people's futures. Lack of electricity shortages deeply affect daily life: students can't study or access digital learning, clinics struggle to power essential equipment, and households rely on polluting fuels like kerosene and firewood.

Energy poverty also widens gender inequality, as women and children spend more time on unpaid labour instead of education or income-generating activities. Additionally, limited electricity access especially in rural areas hinders long term socioeconomic development and restricts the use of digital services and emerging AI tools.

Renewable Energy Promising Future

The rise of renewable energy sectors opens new job opportunities and boosts local economic development. For young Namibians, the clean energy sector offers plenty of job opportunities, in construction, installation, maintenance, technical training, and research, as well as the ability to start a business and become entrepreneurs.

Moreover, clean energy creates powerful cross-sector linkage, such as supporting solar-powered irrigation and cold storage in agriculture, renewable powered desalination for water security, e-mobility in transport, and using green electricity for mining and tourism sectors. Additionally, AI in energy present a new opportunity from solar and wind forecasting to smart metering, e-mobility, smart agriculture, strengthening clean energy systems and expanding AI use across the country.

Challenges facing the Renewable Energy Sector

One of the challenges observed in the renewable energy sector is policy and regulatory complexity. This includes a prolonged permitting process for renewable energy projects. Additionally, due to the high cost of capital in comparison to developed countries, investment in the renewable energy sector still remains expensive. On top of that, the fluctuation in currency poses long-term investment and planning to be challenging. Thus, this limits private sector investment in the sector. Particularly, for green hydrogen requires major investment in production, storage, and export infrastructure, and its high-water demand makes planning essential in water scarce Namibia.

The country's reliance on imported advanced technology limits its ability to capture value, and without strong local participation,

foreign companies may dominate key engineering and construction roles.

Looking Forward

As part of my fellowship journey in Namibia, and with my background in economics and energy, I am committed to contributing to the growth of sustainable energy sector in the country. I aim to apply my technical experience in policy development and designing financial instruments that can unlock resources for enhance investment in renewable energy solutions. As part of my work, I hope to support identify key challenges in the sector and propose practical and economically viable solutions to fasten Namibia clean energy transition.

** Christian Anteneh Demissie is a African Young Women Leaders (AfYWL) Fellow currently with the United Nations Development Programme (UNDP) in Windhoek, Namibia. This article was originally published by the UNDP.*



RURAL SUPPORT: Through the Solar for Health Project, solar panels were installed in rural clinics across Otjozondjupa, Kavango East, and Kunene—supporting the Ministry of Health and Social Services to improve patient care and reduce energy costs.

Hyphen, AHK and GIZ Convene Enterprise, Supplier Development Workshop

Hyphen Hydrogen Energy, in collaboration with AHK Southern Africa and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), convened a targeted Enterprise and Supplier Development (ESD) ground truthing workshop in Windhoek on 11 May 2026, on the sidelines of the EU-Namibia Business Forum.

The workshop forms part of ongoing efforts to strengthen Namibian enterprise participation in the emerging green hydrogen sector and broader industrialisation agenda. It also builds on the letter of intent concluded between Hyphen and AHK Southern Africa and supports the implementation of Hyphen's ESD Programme currently being developed under the H2Uppp funding, facilitated by GIZ.

Earlier this year, Hyphen secured €300,000 (N\$5.8 million) in matched funding under the H2Uppp initiative, a private sector support instrument of the German Federal Ministry for Economic Affairs and Energy (BMWE). The collaboration aims to support the development of an ESD programme designed not only to support the Hyphen project, but to contribute to building long-term capacity and competitiveness within Namibia's broader green industrial economy.

Hyphen is currently developing Namibia's

first large-scale green hydrogen project under a Feasibility and Implementation Agreement (FIA) with the Government of the Republic of Namibia (GRN). The project carries a local procurement target of 30.6% of its estimated €10 billion capex investment, creating substantial opportunities for Namibian enterprises across renewable energy, logistics, civil infrastructure, manufacturing, services, operations and maintenance, and associated value chains.

The workshop brought together ESD practitioners, development finance institutions, commercial banks, business support organisations and government stakeholders to engage in a practical, execution-focused discussion on the realities of enabling meaningful local participation at scale.

Rather than focusing on policy in the abstract, the session interrogated the systemic bottlenecks and structural constraints that continue to limit enterprise participation in large infrastructure and industrial projects.

Discussions focused on:

Access to finance and enterprise bankability
Procurement readiness and qualification barriers

Enterprise capability and scalability

Coordination gaps across the ESD ecosystem
Structural and implementation challenges affecting local participation.

The workshop used the Hyphen project as a practical anchor and case study, while aiming to generate insights and recommendations that are transferable across the green hydrogen sector and Namibia's wider industrialisation efforts.

Johannes Shipepe, Senior Economic Development Manager responsible for Local Content and ESD noted that unlocking local participation requires far more than setting targets.

"Local content ambitions alone are not enough. If Namibia is to realise the socio-economic potential of green hydrogen fully, we must collectively understand where the real bottlenecks lie - whether in procurement design, access to finance, technical capability, or ecosystem coordination - and work collaboratively to address them," he said.

The workshop reflects growing collaboration between industry, GRN, development partners and business support institutions to ensure that Namibia's green hydrogen sector contributes meaningfully to enterprise development, industrial capability and long-term economic transformation.



ENTERPRISE PARTICIPATION: The workshop brought together ESD practitioners, development finance institutions, commercial banks, business support organisations and government stakeholders to engage in a practical, execution-focused discussion on the realities of enabling meaningful local participation at scale.



ALL-TIME HIGH: Exports of Chinese solar photovoltaic technology to Africa rose by 176% to reach 10 GW in March 2026.

Africa Makes Huge Strides in Solar Value Chain

Fifty countries recorded all-time highs in imports of Chinese solar panels in March 2026, whilst 60 others reached their highest levels in six months, according to the latest report from Ember.

Ember is a global energy think tank that aims to accelerate the clean energy transition with data and policy.

Exports to Africa rose by 176% compared to February 2026 to reach 10 GW in March 2026, whilst exports to Asia doubled to reach 39 GW – two new all-time highs.

In Africa, Nigeria (+519%, +1.2 GW compared to February 2026), Kenya (+207%, +1.4 GW) and Ethiopia (+391%, +1.1 GW) all imported more than 1 GW of solar photovoltaic technology for the very first time in a single month, mainly in the form of solar cells.

Elsewhere, records were set in other markets heavily affected by high oil and gas prices, notably in Japan, Australia and the EU. The Middle East was the only region not to see an increase in solar imports, with the closure of

the Strait of Hormuz affecting trade flows.

“In addition to the increase in solar installations within their borders, many African countries are moving up the solar value chain by developing their manufacturing and assembly capabilities,” notes Ember.

Chinese exports of cells and wafers have surged and surpassed those of panels in October 2025, with panels increasingly being assembled outside China.

As the effects of high oil and gas prices reverberate across global energy markets, alternatives such as solar power, batteries and electric vehicles will be crucial in helping countries become more resilient and reduce their dependence on fossil fuels, according to Ember.

The think tank reports, based on official data from Chinese customs authorities, record exports of solar products, batteries and electric vehicles in March 2026, up 70% compared to March 2025 and 38% compared to February 2026, in the wake of the conflict between the United States, Israel and Iran.

Chinese battery exports surged in March, as countries sought to store solar electricity generated during the day for use in the evening. A Shift Towards Clean Electricity

On 21 April, Ember published its report on clean technologies, revealing that these are increasingly reaching a scale capable of cushioning the impacts of global shocks linked to fossil fuels.

Thus, the record growth in solar generation in 2025 was sufficient to replace gas-generated electricity, equivalent to the total LNG exports passing through the Strait of Hormuz last year. The report also shows that the total global fleet of electric vehicles replaced 1.8 million barrels per day of oil demand in 2025, equivalent to 13% of US crude oil production.

The rise of clean electricity reached a new milestone in 2025, with clean energy sources meeting all the growth in global electricity demand, thereby preventing an increase in fossil fuel production.

– *New African*

“

**Solar cooking
is good for
your Health &
Environment.
It is the cheapest
option in terms
of Time and
Money**



SCAN QR TO CONTACT US



SOLAR COOKING

All you need is Sunlight.

Amusha Solar Namibia
C: 081 129 1223/081 318 0284
E: amushainfo@iway.na

WHY SOLAR COOKING?

1. Solar cooking is Free

- Once you have the solar stove itself, all you need is **SUNLIGHT** to cook.
- You reduce spending money on gas for cooking, firewood or electricity.
- Imagine how much longer your gas bottles would last when you're not using them every day?

2. Solar Cooking is quick and easy.

- The Solar Stove is a slower cooker; however, food preparation is quick and simple.
- Season your meat/veggies the way you want, place it in the solar oven, let it cook while you do other things-
- No constant monitoring



3. Food cooked with a solar cooker is healthy.

- When cooking food with low heat, vitamins and other nutrients don't break down.
- Solar cooked food is tasty because less or no water is required when cooking, except in dried food such as rice, beans...

4. Cooking with sunshine is good for the environment

- No use of fuel, firewood or electricity — No Smoke
- It's the greenest cooking option that helps reduce greenhouse emission saving the planet.



5. What you can cook ?

- **Almost everything:** Meat stews, baking, boil, grill meat, pizza or pasta – **No Frying**

Temperature:

- The stove can reach and maintain temperatures between **150 - 170 degrees (250 - 350 Fahrenheit).**
- Keeping the heat adjusted only requires keeping the cooker focused into the sun.
- Solar cooking generally requires less water to cook because the water does not boil away taking valuable nutrients with it.
- Food cooked solar becomes more tender and moist.
- Foods with a high sugar content such as cookies will eventually burn, but even that has a long flexible cooking window.

Cooking Techniques

- Do not overload your stove
- Black pots or bowls are recommended
- Pre-heat the oven esp. when baking
- Use little water when preparing the dough

Cooking Recipes

- plenty can be found in the internet:





FOR EXPORT: Africa has the potential to develop its vast wind and solar energy, but much of its future capacity is not intended for domestic consumption.

Europe's Push for Hydrogen Diverts Solar and Wind Potential from Africa

By Julie Macuga, Kasandra O'Malia, Janna Smith

Africa has the vast potential to develop wind and solar energy, but much of its future capacity is not intended for domestic consumption, but rather export to Europe in the form of “green” hydrogen, according to a new analysis from Global Energy Monitor (GEM).

The feasibility of these projects faces strong headwinds, ranging from a lack of funding and offtakers to unrealistic timelines and technological hurdles, suggesting these large projects won't be economically viable, even if they are built.

Data in the Global Wind Power Tracker and Global Solar Power Tracker count roughly 350 gigawatts (GW) of prospective utility-scale wind and solar capacity across Africa — that is projects that have been announced or are in the pre-construction and construction phases — roughly ten times what is currently in operation across the continent. By comparison, the entire world installed 380 GW of solar in

the first half of 2025. But nearly two-thirds of Africa's proposed renewables capacity, 216 GW across 35 projects, is planned for use in “green” hydrogen production, the majority of which is designated for export rather than remaining in Africa for domestic use.

These projects, sometimes hundreds of times larger than the host country's current wind and solar capacity, pull investment and resources from international decarbonisation efforts, like the goal of tripling of renewables by 2030 that was agreed at COP28. They also pull resources from projects on the other end of the spectrum that can have immediate positive impacts, with projects as small as 50 kW (0.00005 GW) holding the potential to increase local household incomes by two-thirds.

In 11 African countries/areas — Botswana, Djibouti, Egypt, Kenya, Mauritania, Morocco, Mozambique, Namibia, South Africa, The Gambia, and Western Sahara — the promise of becoming green hydrogen hubs and exporting that hydrogen as fuel or industrial feedstocks to Europe has spawned some of the largest proposed energy infrastructure in the world.

However, the companies that are promising to build this infrastructure, the majority of which are European entities, have never built on this scale before, and the export market does not yet exist.

Companies and governments promoting green hydrogen on the continent need to be transparent about the gamble they are taking and ensure that where hydrogen projects are proposed, people have as much autonomy as possible to decide what type of energy and exports are best suited for them.

Hypothetical Hydrogen

Global Energy Monitor's comprehensive coverage of renewables on the African continent paints a picture of large green hydrogen projects being developed in countries that currently have extremely limited energy access for their populations. The term “green” hydrogen refers to any hydrogen or hydrogen-related product, such as ammonia, that is produced using electrolysis specifically powered by renewable energy.

Typically these projects are designed to run on wind, solar, or occasionally hydro power. Because Europe has struggled to meet its renewable energy commitments and emissions goals, some countries are attempting to capitalise on Africa's abundant renewable energy potential.

Beyond Europe and Africa, the global capacity of green hydrogen used specifically for power generation was a mere 0.4 GW in 2024, according to the International Energy Agency. This is dwarfed by most prospective African projects, which on average are 15 times larger at 6.2 GW.

Mozambique and Djibouti have almost no renewable energy infrastructure — 0.1 and .06 GW respectively, or enough capacity to power roughly 50,000 European households — and yet there are plans to build 12 GW and 10 GW of green hydrogen infrastructure in each country, respectively. If the 12 GW project in Mozambique was instead used to provide electricity, it would double the amount of power the country is currently generating. With its much smaller population, Djibouti could have equivalent per capita electricity consumption to Europe with just three GW of wind and solar.

In more industrialised countries such as Egypt, which already has 5.8 GW of operating wind and solar, the country plans to boost its total wind and solar capacity by 39.3 GW with green hydrogen projects. The scale of projects is the most unrealistic for companies proposing infrastructure in Mauritania, with 79.5 GW of announced wind and solar, all of which are set to produce hydrogen.

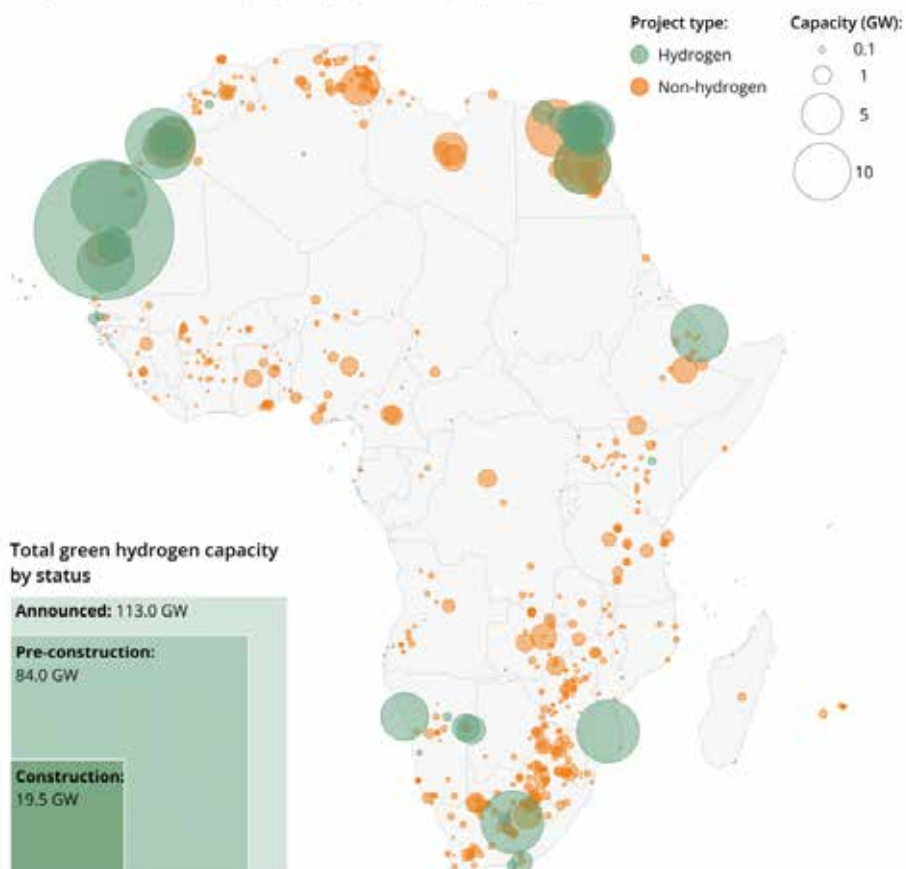
Mauritania only has 0.3 GW of wind and solar in operation, or less than 0.4% of what is proposed. Put another way, a nation with only 0.3 GW of utility-scale wind and solar in operation has plans from multinational developers to build infrastructure 3.4 times the capacity of the current largest energy project in the world, the Three Gorges Dam in China at 22.5 GW.

In addition to their unprecedented size, fewer than half of the green hydrogen projects in Africa have timelines for completion, making it unclear when they would actually come online. Msenge Emoyeni wind farm, at 0.07 GW, is the sole green hydrogen project currently operating in the continent, while 52% (113.0 GW) of hydrogen projects are announced and only 9% (19.5 GW) are under construction.

For a country like South Africa, solar projects take an average of four years to build while wind can take roughly five-

Over 60% of solar and wind capacity in development in Africa is for hydrogen production

Utility-scale solar and wind projects by type and capacity, in gigawatts (GW)



Source: Global Solar Power Tracker, Global Wind Power Tracker

Note: Data include only solar project phases with a capacity of 1 megawatt (MW) or more and wind project phases with a capacity of 10 MW or more. All solar capacities are reported in MWdc.



and-a-half, though these are timelines for projects at smaller scales than the proposed green hydrogen. The country's current largest operational solar project is 0.5 GW, and the largest wind projects only reach 0.1 GW.

Lack of offtakers

If any of these projects do come online, it remains unclear who would be the offtakers, or parties who have committed to buy the hydrogen. Of the 35 green hydrogen projects GEM tracks in Africa, only four have public announcements of offtake agreements with specific buyers. Because of the lack of consumers, Germany's hydrogen strategy states that it would likely have to increase carbon taxation to force the market to shift in order to make imported hydrogen economically viable.

Germany's plans only include 10 GW of domestic green hydrogen production,

though Germany in particular has leaned heavily into imports as a strategy to meet its renewable energy goals, making it a key pillar of its National Hydrogen Strategy. One of the largest projects planning on exporting to Germany is the 30 GW AMAN project in Mauritania; CWP Global initially stated that the project was expected to raise the African nation's GDP by 40–50% by 2030 and 50–60% by 2035. Instead, the project has been paused indefinitely due to a lack of offtakers.

Despite the hype, the market has largely failed to make demand for the product. These projects also rely on the assumption that consumers in Europe will be willing to make the switch to hydrogen-capable technologies, though this has really only been seen in the heavy industry sector, not for widespread domestic energy use. Where hydrogen is planned in industrial applications, major steelmakers have delayed investments and started to walk back green projects, signaling a weak market for green hydrogen imports.

Aside from the Danish GreenGo, which owns the 60 GW Megaton Moon, GEM data show that CWP Global has historically been the biggest player in African green hydrogen, with 41.1 GW planned. Of the prospective green hydrogen projects in Africa, 65% are European-owned and only 25% African-owned. Furthermore, the majority of revenue in the hydrogen value chain is wherever the end user purchases it; therefore, if the bulk of the planned green hydrogen is exported, these projects provide little value to African countries.

For projects that would produce green hydrogen for use in heavy industry, such as steelmaking, more value could be preserved locally if countries produced green iron for export instead. Mauritania, South Africa, and Egypt are already major producers of iron ore.

Funding strategies for large projects also remain unclear. Historically, resource extraction from Africa to Europe has left African nations saddled with inescapable foreign debt, which also makes local ownership of assets difficult.

To add to this, funding from both the private and public sector often falls short in Africa; in 2021, energy investment per capita in Europe was 41 times greater than Sub-Saharan Africa.

The African Development Bank (AfDB) had the aspirational goal of achieving universal electricity access by 2025, however AfDB only procured US\$12 billion total of the estimated US\$60–90 billion per year that was needed.

The multilateral initiative, Mission 300, aims to give access to 250 million Africans by 2030 and has provided access to electricity for 32 million since 2023, although it still requires significant further investment.

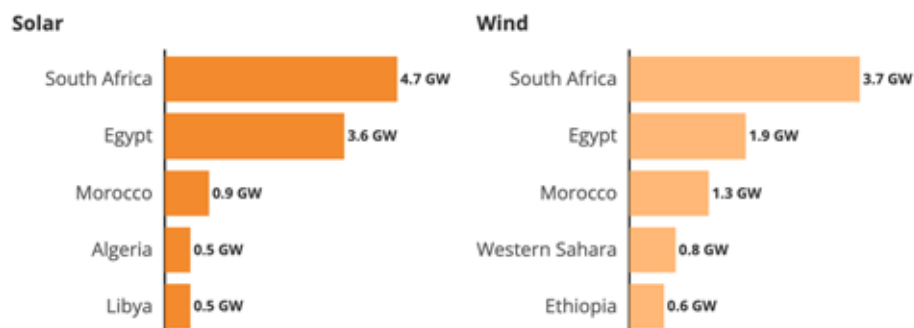
Lack of infrastructure

For most of these countries, especially in Sub-Saharan Africa, transmission systems such as pipelines and electrical transmission lines are lacking or entirely nonexistent. Combustion fuels like coal, oil, gas, and hydrogen, built at the utility scale, either require they be utilised close to the source of that power, or necessitate sprawling and disruptive transmission systems spanning entire countries, while very small-scale projects do not.

In addition, the farther away from the source of hydrogen production that the fuel is transported, the less energy efficient and cost effective it becomes. Most existing pipelines would need to be overhauled, as these pipelines are currently built to keep hydrogen

Top African countries with the largest operating capacity of solar & wind.

Total operating utility-scale solar & wind power capacity by country, in gigawatts (GW)



Source: Global Solar Power Tracker, Global Wind Power Tracker

Note: Data include only solar project phases with a capacity of 1 megawatt (MW) or more and wind project phases with a capacity of 10 MW or more. All solar capacities are reported in MWdc.



out. Establishing local industry, which can use hydrogen on site, such as green iron and green fertiliser, would preempt the need for novel infrastructure while boosting local economies.

Without pipelines, transportation of hydrogen to Europe would require a tremendous effort around shipping, an expensive endeavor: One study found that only 2% of the 10,000 locations studied for export to Europe were cost competitive. Neither export nor import infrastructure to handle hydrogen transportation has yet to begin construction, while much of the infrastructure proposed seems fated to prolong the life of existing fossil fuel networks.

Pipelines also pose the issue of becoming stranded assets with hydrogen infrastructure investments needing both import and export markets to surface and remain stable long term.

Projects that fail to deliver

Smaller projects such as solar minigrids are already feasible and are proven to support African electrification. Energy access has improved in recent decades, but has stagnated since 2020 even where fossil fuels are being used, leaving hundreds of millions unconnected. Electricity is an important and urgently needed driver of economic growth, giving opportunities to impoverished communities.

Currently, developers are limiting local people's ability to advocate for themselves by using minimal environmental standards and failing to make input on environmental impact studies accessible. For communities facing exploitation for hydrogen, a common slogan has been "Africa is not Europe's battery."

While there are examples where a balance between the energy needs of hydrogen production and the energy needs of communities has been sought, these projects still heavily favour hydrogen. In South Africa, the Northern Cape Green Hydrogen Strategy plans for 10 GW of renewables, five GW of which would be used for hydrogen production. Under this plan, 70% of the energy produced would go towards hydrogen exports and only 30% would remain locally.

Hydrogen production is also water-intensive: Producing one kilogram of green hydrogen requires up to 30 liters of fresh water, which risks depleting local water supplies. For regions like South Africa, some developers have tried to tackle the local water and energy issues by planning to use only desalinated sea water.

Namibia's 7 GW Daures Green Hydrogen Village similarly mentions ocean water as a solution. The company has also ventured to ensure 10% of the project's shareholders are local community groups, and 50% of workers are slated to be from the Daures area as well.

Africa needs an estimated 160 GW of energy to provide electricity for the roughly 600 million Africans who do not yet have access, and small, distributed projects have proven pivotal. Africa's immense potential for wind and solar projects can provide energy access and economic opportunities.

GEM tracks 139 GW of utility-scale solar and wind projects that would provide clean electricity throughout the continent if the funding and backing can manifest, but those projects need solid footing, which hydrogen hasn't yet proven itself to have.

- Global Energy Monitor



PIONEER: The 60 MW Choma Solar plant with a 20 MWh BESS was Zambia's first utility-scale solar-plus-storage project.

Zambia's US\$235 Million Nambala Deal Signals *a Shift in How Africa Thinks About Solar*

Zambia built its grid on rain. One drought showed exactly what that costs. A 250 MWh battery project won't change the weather, but it means the grid no longer has to wait for it.

Zambia's electricity system runs on water. More than 80% of the country's generation comes from hydropower at the Kariba and Itzhi-Tezhi dams. That held until 2024, when drought forced blackouts of up to 12 hours a day. The crisis did what years of policy papers had not: it made the case for battery storage impossible to ignore.

Zambian IPP Power Systems Investment and Construction (PSI) has signed an EPC agreement with POWERCHINA for a 290 MWp solar plant in Mumbwa district paired with a 50 MW / 250 MWh battery energy storage system (BESS).

Total investment is approximately US\$235 million (about N\$3.8 billion), with commercial operations targeted for Q4 2027.

POWERCHINA's presence raises a question: what brought a contractor of its scale to Zambia? The answer is policy reform. Zambia's delivery of the Scaling Solar and GET FiT programmes established a track record of bankable, internationally structured

PPAs, and the government has streamlined approval timelines. For a contractor committing US\$235 million, that record matters more than tariff levels.

Nambala is not a first mover. The Africa Solar Industry Association (AFSIA) tracks 533.4 MWp of operational utility-scale solar in Zambia and 12.2 GWp in development.

Zambia Electricity Supply Corporation Limited (ZESCO)'s own solar and BESS portfolio spans 779.5 MW at a combined value of US\$714.9 million (about N\$11.6 billion). The 60 MW Choma Solar plant with a 20 MWh BESS was the country's first utility-scale solar-plus-storage project. A 39 MWh hybrid microgrid at Ruida Mine has established a mining-sector use case.

A Market Ahead of Its Regulatory Framework.

Most of this deployment is happening not because a commercial storage market exists, but because obligation or necessity is driving it.

ZESCO's BESS projects follow IRP requirements. The government's Carbon Feed-In Premium Programme (CFIP) mandates co-located storage on all new solar above 300

MW. Mining companies are acting on reliability and avoided diesel costs. A route to market for standalone storage as a commercial asset does not yet exist.

The economics are also constrained. Zambia's grid tariff sits at the lower end of the African spectrum, and there is no time-of-use pricing. Without differentiated peak and off-peak rates, operators cannot recover costs through energy arbitrage, one of the primary revenue streams available to BESS developers in more mature markets.

The Energy Regulation Board of Zambia (ERB) is working through foundational questions, including whether BESS should be classified as a generator or a load, with battery standards and a full regulatory framework expected by end of 2026.

These tensions were debated at AFSIA's 6th e-conference on storage solutions in May 2026, with participants from ZESCO, the ERB, the Solar Industry Association of Zambia (SIAZ) and the Zambia Renewable Energy Association (ZARENA). The consensus: deployment is outrunning the rules and closing that gap is the critical path to private investment at scale.

— AFSIA



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.



“Drive the future with
Tesla Energy Solutions,
Namibia’s pioneering
choice for green,
sustainable EV charging.”

A better tomorrow,
powered by
Tesla Energy Solutions



Sustainable
by Choice



Smart &
Reliable



Safe &
Durable



Powering
Namibia’s Future

Email: info@teslaes.com

evsupport@teslaes.com

General enquiries: +264 64 271 750

EV Charging support: +264 64 271 757