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Energizing Africa: Accelerating Development with Solar

CEO Caucus | Private Sector Roundtable, Africa

5th August 2024 | Time: 2:30-4:30 PM EAT or 12:30-2:30 PM WAT | Virtual





Background

The International Solar Alliance (ISA) constituted a high-level forum of select CEOs, to forge a greater understanding of crucial issues and achieve quantum growth in solar energy. The forum will help garner insights into developing a diversified and resilient global supply chain, support technological innovations, access, and assist in mobilizing capital, and map out an enabling policy environment. With these founding objectives, ISA officially launched the CEO Caucus with a virtual meeting on the 6th of June 2024.

Fourth in the series, the African roundtable focused on bottlenecks in the solar industry by bringing together industry leaders, and key stakeholders from intergovernmental bodies, solar manufacturing, solar development, finance, and clean technologies sector to deliberate a smoother transition to green energy. (The list of participants is appended)

Context

Dr. Ajay Mathur, Director General (DG), ISA commenced his address by emphasizing the need to add 600 GW of solar capacity annually to meet global targets. He highlighted the shortfall witnessed in 2023 when only 389 GW of new capacity was added.

Speaking about the investment disparities for solar projects, he asserted that the majority of financial supply is being directed to just five nations - a key reason for underdevelopment in African nations despite their vast potential.

Addressing the fact that Africa merely holds 1% of solar capacity while having 60% of the total solar resources at its disposal, he further stressed the rapid enhancement of infrastructural capacities across the continent to bridge the gap.

“ISA understands the immense potential the continent holds and therefore has made Africa a key focus area for increasing solar installations and capacity,” Dr Mathur conveyed. For a thriving solar sector, which can be achieved by focusing on multiple factors, he presented a three-pronged strategy:

- Enabling regulatory environment
- Grants in aid and capital support
- Promotion of research and development



He informed the panel about the ISA's initiative to identify solar startups with the potential to transform the industry. Through this initiative, 20 solar startups in Africa have been selected. The ISA is now facilitating accelerator workshops to help these startups connect with potential investors and technology providers, focus on brand building, and scale their operations. The goal is to support these startups in becoming the "Amazons of tomorrow," providing solar services to Africa and beyond.

Dr. Mathur stressed the need for a safety mechanism to alleviate the skepticism of the investors for investing in Africa. To solve this problem, ISA along with the World Bank, is in the process of creating a Global Solar Facility (GSF) to provide guarantees to the private sector for investment in small-scale solar projects, he added.

The DG further emphasized the need to accelerate the capacity-building process by enhancing skills on par with the growing solar industry. He notified the panel about ISA's commitment to not only enhancing skills but also ensuring that trainees are certified and job-ready. He proposed certification programs for the workers, aligning with the specific needs of projects in different countries.

Concluding his remarks, he urged the speakers to enlighten the gathering with their valuable insights to create sustainable solar growth in Africa. Dr. Ashwini Kumar and Mr. Ramesh took over the discussion.



Key deliberations:

The roundtable discussed four critical themes:

1. How can African countries leverage their abundant solar irradiation and critical mineral resources to foster local solar manufacturing capabilities and create a domestic value chain for solar deployment?

The key issue:

Despite Africa's abundant sunshine, which covers 60% of its countries and the presence of large amounts of rare earth deposits, solar photovoltaic (PV) adoption remains at 1%. This is a humongous waste of potential.

Points of discussion:

1. Integration of solar energy with mining and industrial development through

a) Local refinement and transformation of minerals into products of high value:

The mining sector, which contributes more than half of the exports for various African nations, has been pivotal for the continent's economy. Currently, countries rich in critical minerals focus on ore extraction and direct export, with very little attention to local refinement and transformation of these raw materials. For manufacturing solar components, panelists opined tapping into the potential of local refinement of minerals and their transformation into components. A crucial segment of the value chain can be addressed to catalyze the African solar industry's net growth.

b) Using solar power to decarbonize mining operations

Combining solar deployment with mining operations not only helps decarbonize the sector but also attracts more investors to set up solar farms. Investing in solar-backed mining operations is a win-win scenario for investors as it fulfills energy requirements and ensures safe investments. Investors can mitigate payment-related risks through commercial activities supported by solar energy.



2. What are the critical gaps in the regulatory environment for incentivizing renewable energy?

Key Issue:

Stable policies and an innovative, trade-friendly regulatory environment are necessary for any industry to grow. When the market for an industry is already cluttered due to heavy incentivization by competitor countries, incentivizing domestic production becomes an imminent requirement. Therefore, the formation of trade-friendly policies that offer stability is crucial to building trust among founders and investors.

Points of Discussion

a) Lack of policy awareness and promotion to attract investors

Panelists have observed that more often, investors lack awareness in the context of policy regulations, their flexibility, and the availability of the incentives provided by the government.

Even if there is some awareness, skepticism regarding the stability of policies acts as a major deterrent that drives investors away, resulting in an ultra-high cost of finance acquisition. Setting up trade-friendly policies that guarantee stability over long periods and adequately advertising them can surely instill confidence in investors, lowering the cost of capital acquisition.

b) Data-related inaccuracies and political lethargy

There is a misconception that growth in African countries is stagnant, this can be largely attributed to inaccurate data and outdated information sharing modes from nodal agencies. For instance, Tanzania has reported a 2MW solar deployment for the past five years, while the actual figure is likely much higher. Addressing these data gaps could attract investors.

Further elaborating on the point, the panelists believe that inaccuracies and a lack of awareness stem from a lack of zeal by the government to pursue renewable agendas. The absence of obligations for utilities to purchase solar power is a prime example of this issue. Therefore, there is a need to prioritize the shift to renewable energy to witness any substantial change in the current scenario.



3. What strategies can be employed to establish effective partnerships that attract private capital investments?

Key issue:

Africa needs to build its renewable energy industry from the start. To achieve that, it needs global support in the form of investments and research & development.

Points of Discussion

a) Distributed energy and inter-connected power grids

The panel emphasized the importance of distributed energy solutions, which when put to work in tandem with centralized utilities, can attract private capital investments, international support, and technical expertise. It also advocated for the creation of interconnected power grids across African countries as a strategy to boost solar energy deployment. Collaborating with the stakeholders can develop infrastructure that supports the efficient transmission and distribution of solar energy across borders, thereby increasing the scalability and impact of solar projects.

b. Channeling investments through academia

As promoting academic research in the field of PV opens up investment channels, panelists suggested manufacturers collaborate with universities on research and development. This collaboration can promote new investment channels as investors find it easy to trust educational institutions. Innovative solutions could emerge from these collaborations.

4. What are the main challenges faced at the project level for renewable energy investments in Africa, and how can blended finance facilitate successful project financing?

Key issue:

Commercial lenders prefer proven business models with visible cash flow and credible borrowers. However, the clean energy sector, still emerging with many small-scale entrepreneurs, struggles to secure blended finance.



Points of Discussion

a) Blended finance as an effective tool for the development of mini-grid

Blended finance tools are crucial for countries like Nigeria, which have significant mini-grid development potential.

As mini-grid projects attract less interest among investors, public or philanthropic capital employed in blended finance transactions makes the investment more attractive to private commercial investors. It also draws private capital – including finance for achieving climate goals and the Sustainable Development Goals (SDGs) – that would not have been feasible otherwise.

b) Launching global institutions

ISA's collaboration with the World Bank to launch a Global Solar Facility (GSF) aims to catalyze solar investments worldwide, beginning with Africa's underserved segments and geographies. This initiative seeks to unlock commercial capital through risk-mitigated financing, with a prime focus on decentralized solar solutions and rooftop solar. GSF aims to finance underserved projects and ensure sustainable development.

4. What mechanisms can be adopted to develop a skilled green workforce in Africa? How can focusing on job creation and upskilling in solar PV, battery storage, and allied industries support the sustainable growth of the solar sector?

Key issue:

To meet growth expectations, a skilled workforce proficient in the latest technologies is essential. Implementing a standardized training module to make the workforce industry-ready is urgent.



Points of Discussion

a) Certification of workforce to ensure they are industry-ready

The panel emphasized the importance of distributed energy solutions, which when put to work in tandem with centralized utilities, can attract private capital investments, international support, and technical expertise. It also advocated for the creation of interconnected power grids across African countries as a strategy to boost solar energy deployment. Collaborating with the stakeholders can develop infrastructure that supports the efficient transmission and distribution of solar energy across borders, thereby increasing the scalability and impact of solar projects.

b. The need for local value addition

As promoting academic research in the field of PV opens up investment channels, panelists suggested manufacturers collaborate with universities on research and development. This collaboration can promote new investment channels as investors find it easy to trust educational institutions. Innovative solutions could emerge from these collaborations.





Annex 1: List of Participants





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1. Mr. Uvie Ugono, Founder Solynta Energy
2. Mr. Wessam Al-Baz, Co-founder and CEO Nexus Analytica
3. Ms. Damilona Asaleya, VP Renewable Energy Association of Nigeria
4. Mr. Abel Didier Tella, Director General of APUA, the Association of Power Utilities of Africa
5. Prof. Yinka Omorogbe, CEO/founder Etinpower Limited
6. Mr. Isaiah D Nyakusendwa, Chairman Renewable Energy Association of Zimbabwe
7. Ms. Emma laswai Taraea, Deputy Executive Secretary · Tanzania Renewable Energy Association (TAREA)
8. Mr. Henry Carr, Senior policy manager, cross-boundary energy
9. Dr. Johnstone Chikwanda, Renowned Renewable journalist
10. Mr. Bonani Seteni, Climate and energy specialist, WWF South Africa
11. Mr. Samson Tsegaye, Country Director, Ethiopian Solar Energy Foundation, Ethiopia
12. Mr. Tinyan Ogiehor, Off Grid Lead, Power Africa, Nigeria
13. Ms. Ana Hadjuka, Founder & CEO, Africa GreenCo., Egypt
14. Mr. Adly Kafafy, VP-Africa & New Ventures, TAQA Arabia, Egypt
15. Ms. Omolara Osiyemi, Director of Operations, Africa Solar Industry Association, Rwanda
16. Mr. Ramy Moussa, Assistant Professor, American University in Cairo, Egypt
17. Mr. Knollis Delle, Assistant Research Officer, Commonwealth Secretariat





Annex 2: Event Background Note





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Energizing Africa: Accelerating Development with Solar

August 05, 2024 | 2:30-4:30 PM EAT or 12:30-2:30 PM WAT |
Venue: Virtual





Context

Renewable energy lies at the core of addressing climate challenges, and though not a silver bullet against climate change, it sure is our best hope in preventing irreversible damage. Worldwide solar energy, among the fastest growing sectors, is shining as the most viable option, commanding a pivotal role. Acknowledging the writing on the wall, global leaders at COP28 agreed to triple renewable energy capacity by 2030 to ensure Net Zero alignment.

The development of solar energy can play a critical role in Africa's development, with its numerous co-benefits, including the enhancement of energy infrastructure, the growth of a supportive startup and services ecosystem for clean energy, the creation of new jobs, and improvements in health and education indicators.

Endowed with an abundance of sunlight and plentiful critical mineral resources, Africa's potential to reshape its future through solar is boundless. The African Union in its Agenda 2063, has set an ambitious target to ramp up its share in world trade from 2% to 12% coupled with a renewable capacity push that projects growth to 180 GW by 2030 which further expands to 1.2 TW by 2050. Additionally, the African Manufacturing report by SEforALL highlights the potential of African nations to emerge as significant players in the solar sector by 2030. The shift towards green energy holds a lot of promise including a potential GDP increase of 6.4% by 2050, the creation of at least 8 million jobs by 2030, and the emergence of new exporters of renewable components.

However, while the demand sees an uptrend with solar capacity growing at 54% CAGR over the last decade with notable advancements in collaborations and commitments for financing solar, a lot more needs to be done to realize the untapped potential, as Africa contributes only 1% of total installed PV capacity. This is largely due to infrastructural and financial mismatches.

Bridging this huge gap and actualizing Africa's enormous potential is in the interest of the world's future. Accentuated during the COVID crisis and buffeted by subsequent geo-political turbulences, the global solar supply needs serious realignment. Enabling policy frameworks to promote the manufacturing of technologically advanced products and a regional focus on improving accessibility to finance would be critical.



Realignment can be achieved with a three-pronged trade-strengthening focus strategy:

Enabling regulatory environment

- This can be achieved through fiscal incentives, import tariffs, anti-dumping duties, and local manufacturing requirements for critical component manufacturing.
- Notable examples are the USA's Inflation Reduction Act (IRA), India's Performance-Linked Incentives (PLI), Malaysian Sales Tax exemption, and China's reduced corporate income tax for renewable manufacturers.

Grants in aid and capital support

- Several countries have already introduced financial mechanisms such as Spain's Promoted through prompt access to low-cost capital, guarantees for safeguarding investments, and affordable access to land, and other manufacturing-related equipment.
- Notable examples are Indonesia's Sustainable Energy Fund (SEF), and land grants for Solar by the State of Maharashtra in India.

Promotion of research and development

- Fostered through direct fund transfers to R&D units of manufacturing corporations, competitive innovation programs, and financial support to academic research institutions.
- Notable examples in existence are the USA's Solar Energy Technologies Office (SETO) and the Photovoltaic Innovation Alliance by Germany.

African nations like Kenya already meet most of their energy requirements through renewables and South Africa, Algeria, and Egypt are undertaking major capacity-building projects signaling a bright future. As many nations build their manufacturing capabilities, they are exploring measures to provide incentives for domestic industries. South Africa recently introduced a 10% import duty on solar PV panels, cells, and modules as part of its South African Renewable Energy Masterplan (SAREM). Global examples like the USA's IRA, Indian PLIs, and Malaysian Sales Tax exemption can provide valuable insights.

Start-ups are infusing young energy, and the African Solar industry is blossoming with new-age start-ups emerging as on-ground changemakers and investment magnets, with innovative solutions that are revolutionizing the African renewable landscape.

Projections are that financing Africa's energy transition will require \$190 billion annually from 2026 to 2030 which requires all-round effort and global support through green bonds, power purchase agreements, microfinance, and solar loans and risk mitigation facilities.



Our meeting

The virtual private sector roundtable hosted by ISA on 05th August 2024 focuses on clearly articulating the requirements of the private sector to be able to deploy solar at an accelerated pace across the African continent. Financial support and strengthening policymaking for enhancing solar energy manufacturing supply chains within the region are of utmost importance.

The participants for this session include leaders from the private sector working on clean technologies, finance, solar manufacturing and deployment, renewable energy companies, international organizations and industry experts.

Themes of Deliberation

The aim of today's discussions is to understand how countries in Africa, with an abundance of solar irradiation and critical mineral resources, can establish a supportive ecosystem for catalyzing new solar businesses and developing a sustainable domestic solar value chain. Further, we also wish to enhance policy and regulatory frameworks for climate-focused investments, making finance accessible and affordable.

Finally, we wish to gain a holistic understanding of the private sector's challenges which can be addressed for accelerating deployment of solar PV to meet Africa's growing demand for electricity.

A few dimensions that we seek to address in this discussion are:

- How can African countries leverage their abundant solar irradiation and critical mineral resources to foster local solar manufacturing capabilities and create a domestic value chain for solar deployment?
- What are the critical gaps in the regulatory environment for incentivizing renewable energy and solar sector entrepreneurs and innovators?
- What strategies can be employed to establish effective partnerships that attract private capital investments, international support, and expertise for the solar energy sector in Africa, including R&D collaborations across regions and technologies?

What are the main challenges faced at the project level for renewable energy investments in Africa, and how can blended finance tools be practically applied to overcome these barriers and facilitate successful project financing?

- What mechanisms can be implemented to develop a skilled green workforce in Africa, focusing on job creation and upskilling in solar PV, battery storage, and allied industries, to support the sustainable growth of the solar sector?



About CEO Caucus

The International Solar Alliance (ISA) launched the CEO Caucus on June 6, 2024, as a high-level consultative platform for industry leaders to collaborate with other key stakeholders. Their task was to identify and address challenges to accelerating solar deployment at scale to achieve Net Zero goals by mid-century. Over the course of these roundtables, many critical challenges and bottlenecks ailing the solar industry have been identified and deliberated upon. These include:

- The need to incentivize the domestic solar industry to enhance manufacturing capacities in emerging markets as well as developing economies.
- Collaborations between R&D centers to accelerate technological advancements and scale next-generation solar technologies.
- Additional initiatives that are required to enhance demand for solar deployment, such as facilitating finance, and fostering technological innovations across industry and among countries.
- Innovative funding schemes to raise private capital and make concessional finance available particularly for solar deployment initiatives in the Global South.

The current series shall reach its culmination on September 5th-6th, 2024 in New Delhi with ISA's "Solar Festival", where a Pathway document charting the future course will be revealed.

CEO Caucus Events:

1. Addressing Bottlenecks for Building the Global Solar Energy Sector - June 6, 2024 (Virtual)
2. Empowering Europe's Solar Future: A Roadmap to Diversify, Innovate, and Sustain- June 13, 2024 (Brussels)
3. Driving Solar Energy Revolution: Growth Insights for Global Impact - July 15, 2024 (New York)
4. Energizing Africa: Accelerating Development with Solar - August 5, 2024 (Virtual)
5. Private sector Roundtable - August 14, 2024 (Australia)
6. Technical Roundtable on Pathway Document - (Virtual)



Annex 3: Event Series Note





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CEO Caucus:
A Global High-Level
Consultative Platform for
Industry Collaboration



1. Building an industry collective to unlock full capacity of solar

Achieving net-zero emissions by mid-century to maintain the 1.5-degree Celsius climate target is critically dependent on a successful transition to clean energy. To achieve this transition, and meet the goal of tripling renewables by 2030, it is essential to add at least 600 GW of solar power annually from 2023 to 2030, requiring investments of USD 500 billion per year. However, the road to accelerate solar deployment remains full of obstacles. There's a need to create a diversified and more resilient global solar manufacturing supply chain, conditions to unlock financing and for fostering technological innovations, and to strengthen solar powered applications as demand drivers to boost deployment of solar at scale across the world. The private sector plays a critical role across all these aspects and their perspectives on these issues are essential for framing the way forward.

To catalyze this, the International Solar Alliance (ISA) is constituting high-level forum of select Leaders to deliberate on measures and potential collective action for addressing challenges to unlock the full potential of the sector. The 'CEO Caucus' will provide industry leaders with a platform to collaborate with key stakeholders to create pathways for global growth through interventions across the solar value-chain. In this process, ISA will also collaborate with like-minded organisations from across the world to achieve its mission of facilitating the private sector for accelerating clean energy transitions.

This initiative is in continuation to ISAs on-going efforts to further strengthen public-private partnerships to enhance adoption of solar energy across the globe.





2. A consultative platform to build pathways for global growth

The CEO Caucus will bring together global leaders working on clean technologies, solar manufacturing and deployment, renewable energy companies, and leaders from global conglomerates with significant net-zero commitments. The platform will enable targeted discussions on the shared challenges within the industry, foster private sector's engagement with key policymakers and propose solutions to accelerate the adoption of solar energy across regions

ISA will conduct a series of roundtables under the 'CEO Caucus' and also gather global viewpoints on the solar sector on the sidelines of ISA's Regional Committee meetings (RCMs). The discussion points from each session will be developed into specific discussion notes. Finally, all of the topics and suggestive measures covered in every meeting will be combined into a "*Pathway Document*", outlining a suggested path forward for all stakeholders—both private and public—to promote the growth of solar markets.

This platform will serve as an ongoing forum, continuously engaging with stakeholders to develop and actualize a comprehensive roadmap for expanding solar adoption.

3. Key themes of discussion for the CEO Caucus

1. Expanding the global footprint of solar manufacturing

The main challenge in manufacturing is that it is highly concentrated in specific regions which can lead to supply chain disruptions. Through initiating deliberations, ISA wants to boost the global footprint of solar manufacturing. Direct support measures for solar manufacturing play a key role in incentivizing the exponentially large scale-up needed for new market entrants to be competitive. However, some of these measures can be perceived as protectionist. Furthermore, concerns are increasing about recyclability, waste, and the total life cycle footprint of solar modules and other components. Therefore, ISA CEO Caucus will work towards designing a holistic strategy for solar manufacturing, targeting both upstream and downstream parts of the value chain.

2. Unlocking capital to propel solar manufacturing led growth

One of the major obstacles to developing resilient global solar supply chains is the lack of adequate financing for solar manufacturing. Support for both capital and operating expenses is especially crucial in emerging markets. Currently, financing for solar manufacturing is concentrated in a few countries, and the significant multi-billion dollar investments required for polysilicon, wafer/ingot, and cell production pose an even greater challenge for smaller and less developed nations. Innovative ways of capital deployment can help overcome these challenges and drive ecosystem growth by propelling solar manufacturing. There is a significant opportunity for nations and international institutions to gradually increase their investments in clean energy manufacturing within their energy portfolios.

3. Fostering technological innovations

Emerging markets that have significant plans for solar installation may have limited expertise and R&D funding to develop solar supply chains domestically. Research on next-generation higher-efficiency technologies, including interdigitated back-contact cells, which supersede existing crystalline silicon cells are even more concentrated with only few countries. Further, critical equipment (particularly in the polysilicon, wafer/ingot and cell manufacturing) are often bottlenecked, with a small number of suppliers worldwide. Emerging markets may be challenged in procuring or gaining access to this equipment. Therefore, there is a need to increase access to technology for all regions through collaborative action.

4. Applications oriented demand generation

Market depends on demand and therefore countries may consider offering "guaranteed demand" to manufacturers setting up new capacity, as a buyer of last resort at a guaranteed price, but only after market forces have been exhausted. Further, the 'CEO Caucus' can look at leveraging the platform for cross-sectoral partnerships and engagements to foster application-based demand generation in the solar sector.



4. Series of consultative forum

Leading up to the Solar Festival and at the Festival, a series of roundtable sessions will be organized. Below is the proposed calendar for this year under the first CEO's Caucus.

1. Private Sector Roundtable- June 6, 2024 (Virtual)
2. Private Sector Roundtable - June 13, 2024 - Brussels, Belgium
3. Private Sector Roundtable - July 15, 2024 - New York, USA
4. Private Sector Roundtable - August 5, 2024 - Africa (Virtual)
5. Private Sector Roundtable - August 14, 2024 - Sydney, Australia
6. **Solar Festival - September 5-6, 2024: A high-level plenary, building on the Private Sector Roundtable series, with select CEOs, will be convened on September 5, 2024. The Pathway document will be released at the festival*.**

