

EASE OF DOING SOLAR

2026



Acknowledgements

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Foreword



The global solar transition has entered a new phase. In 2026, global solar capacity crossed 3 TW – a milestone that would have seemed extraordinary only a few years ago. Solar is now at the centre of the global energy transition, accounting for nearly three-quarters of renewable capacity additions in 2025. Yet the next phase of the transition will be defined not simply by how much solar we add, but by how effectively we translate this momentum into reliable, affordable and inclusive energy systems across countries and regions.

The International Solar Alliance launched Ease of Doing Solar in 2019 as a four-country pilot to understand the barriers between solar ambition and on-the-ground deployment. Five editions later, **EoDS 2026** covers 127 Member and Signatory Countries. Its purpose has evolved with the transition itself: from asking whether countries are ready for solar to asking whether they can finance, sustain and scale it.

The world added a record 655 GW of solar capacity in 2025, yet across the ISA membership, more than 90% of investment flowed to just 26 countries. Our 47 African members collectively received around USD 9 billion. This is not a shortage of sunlight, nor of need or ambition, it is purely a gap in access to affordable, appropriate capital. For many emerging and developing economies, that challenge is compounded by currency risk and the high cost of borrowing. The energy shock of early 2026 underlined an important lesson: energy dependence creates financial vulnerability, while locally financed clean energy can strengthen both energy sovereignty and economic resilience.

That is why this fifth edition puts **Local Currency Financing** at its core. A new **Regional Classification**, introduced in this edition, enables countries to compare

progress with its relevant peers. **Energy Transition Pathways** provide a clearer picture of each country's starting point, while the **SOLARISE matrix** identifies solar applications positioned for scale. **Distributed Solar**, as a technology, is recognised not as a peripheral solution, but as an essential pathway for bringing reliable energy to communities that need it most. EoDS is ultimately not a ranking, it is a tool for action. It seeks to help governments identify the reforms that matter, financiers understand where risk can be addressed, development partners target support more effectively, and industry see where the global opportunity is emerging. The world does not lack capital for the solar transition, the challenge is to make that capital accessible, affordable and fit for purpose in the countries where its impact can be greatest. That is the transition we must now deliver.

I thank our Member Countries, National Support Units, Regional Coordinators, EY and other partners for the data, perspectives and commitment that have made this report possible.

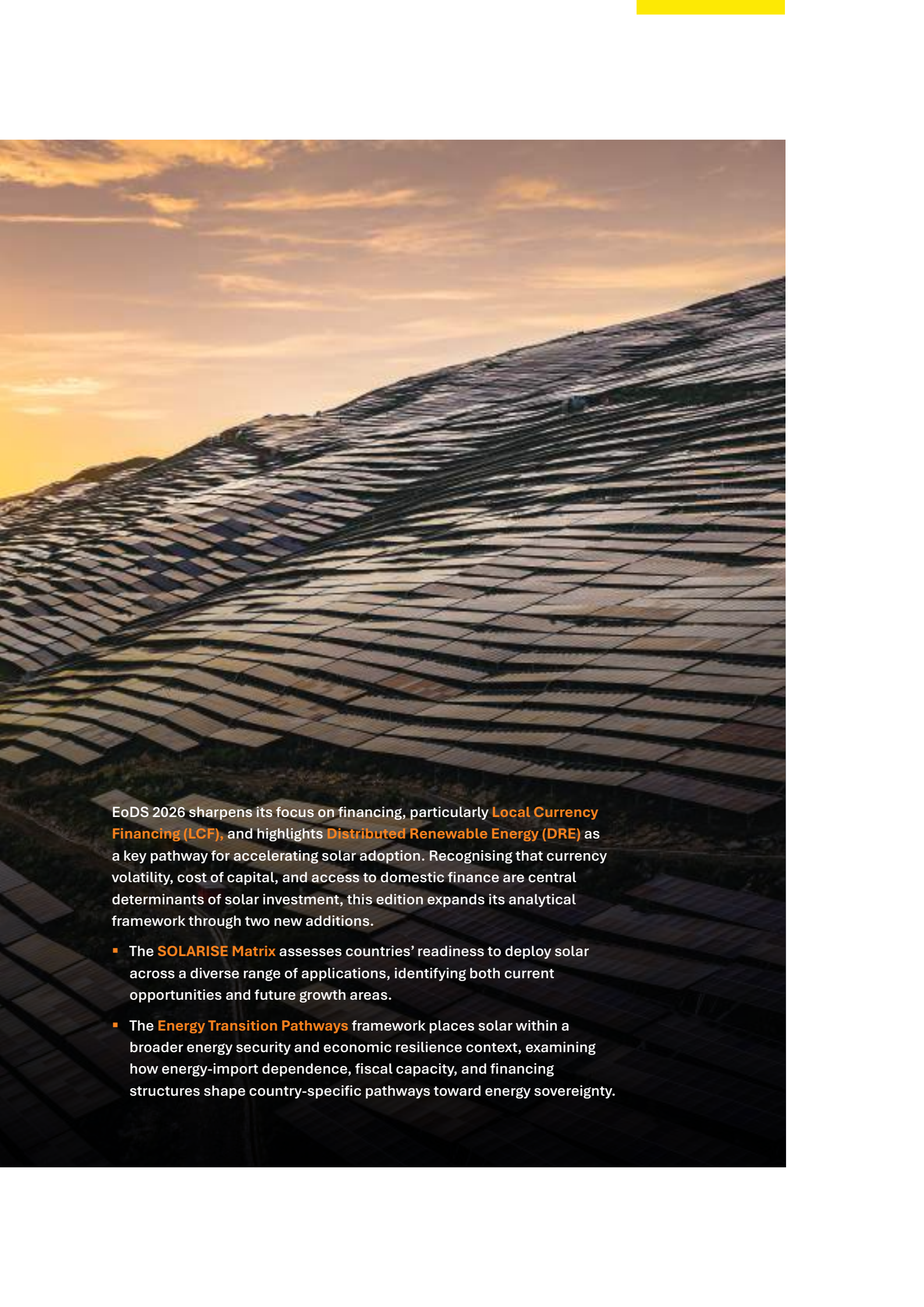
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Overview



ISA is proud to present the fifth edition of the Ease of Doing Solar (EoDS), its flagship instrument for advancing solar deployment across ISA Member and Signatory Countries.



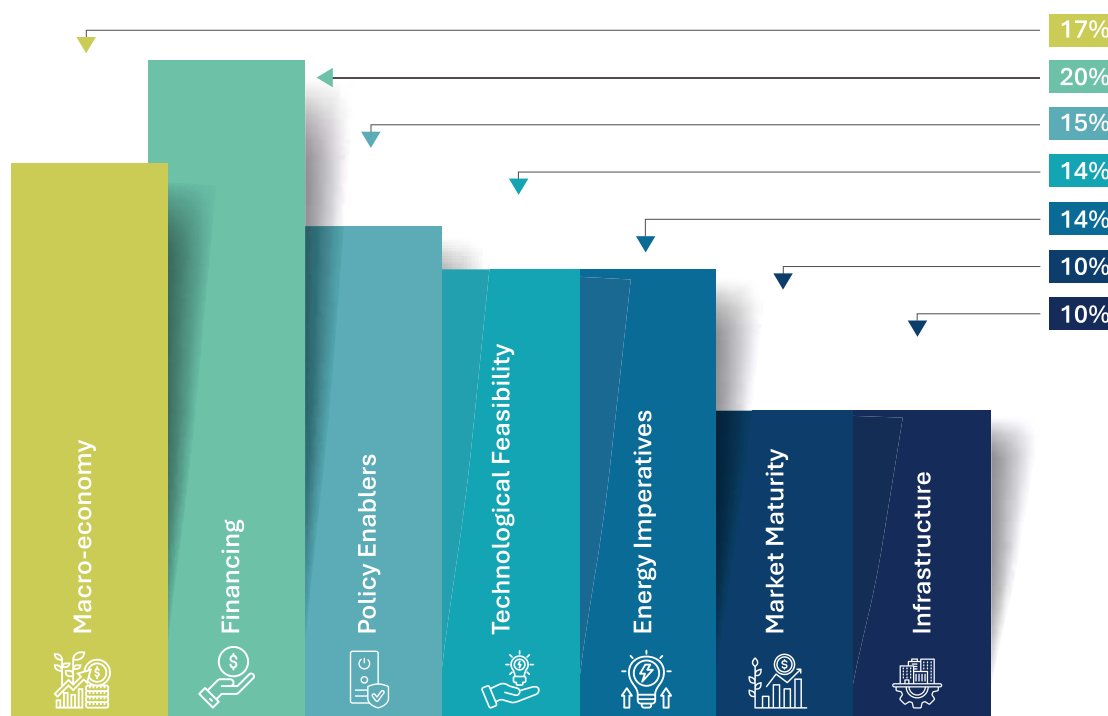
EoDS 2026 sharpens its focus on financing, particularly **Local Currency Financing (LCF)**, and highlights **Distributed Renewable Energy (DRE)** as a key pathway for accelerating solar adoption. Recognising that currency volatility, cost of capital, and access to domestic finance are central determinants of solar investment, this edition expands its analytical framework through two new additions.

- The **SOLARISE Matrix** assesses countries' readiness to deploy solar across a diverse range of applications, identifying both current opportunities and future growth areas.
- The **Energy Transition Pathways** framework places solar within a broader energy security and economic resilience context, examining how energy-import dependence, fiscal capacity, and financing structures shape country-specific pathways toward energy sovereignty.

About the EoDS

First piloted in 2019, EoDS has evolved from a benchmarking exercise into a diagnostic tool, with each edition moving beyond measuring readiness to identifying the specific reforms needed to unlock scale. The 2026 edition assesses the **127 ISA Member and Signatory Countries** against **90 Key Performance Indicators** (KPIs) grouped into seven drivers:

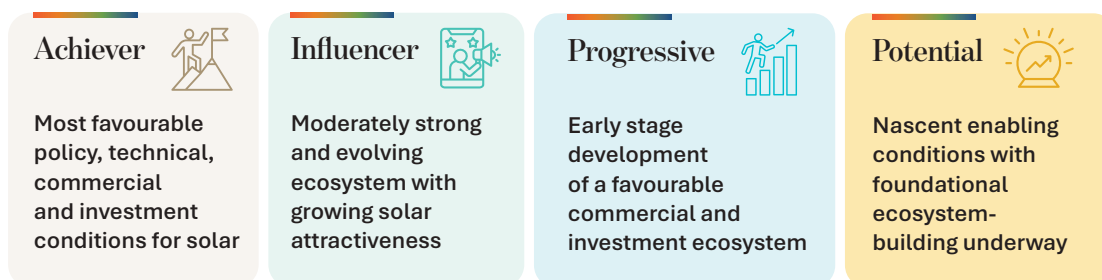
Seven Analytical Drivers and Weightages*



The evidence comes from two tracks:

Multilingual surveys conducted with ISA's Regional Coordinators and National Support Units, and from around 50 global secondary sources such as the World Bank, the IMF, IRENA and the IEA. Each country is then seen through two lenses.

A global classification which places it in one of four tiers:



A regional classification, introduced for the first time this year, which benchmarks each country against its regional peers.

Exemplar

Advanced solar ecosystem with strong policy, financing, and market maturity, serving as a regional benchmark

Emergent

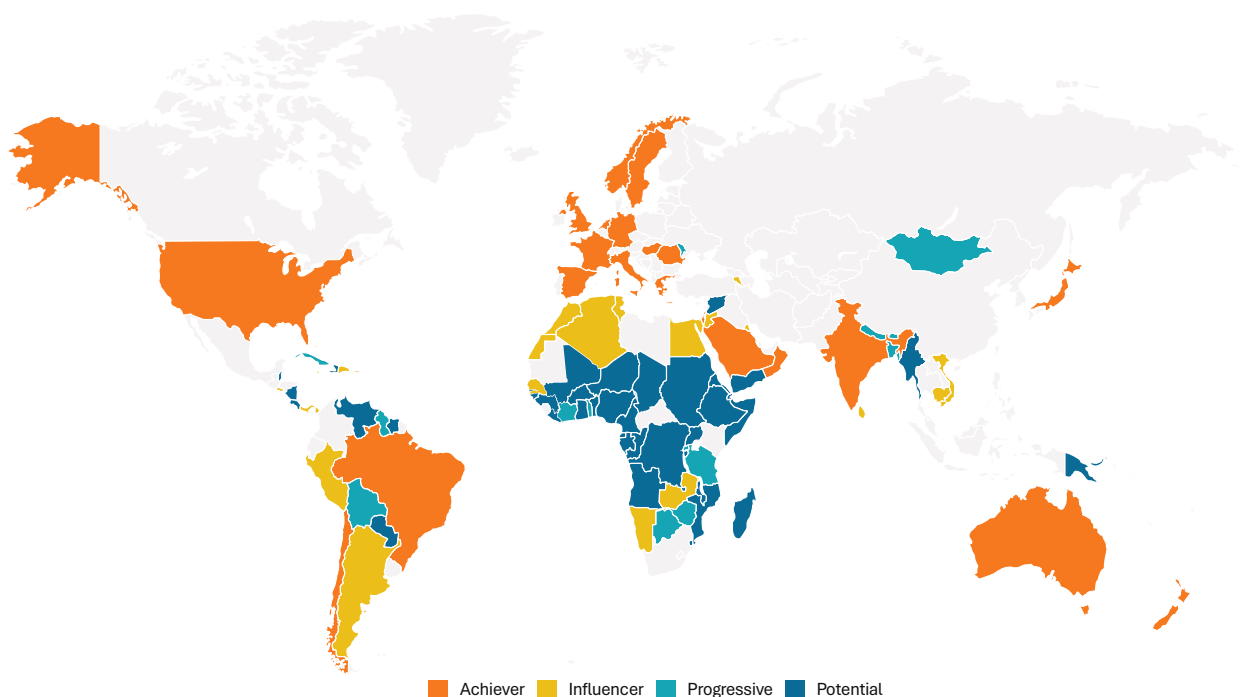
Developing solar ecosystem with visible progress, but requiring stronger policy, financing, and institutional support

The 2026 Focus: Local Currency Financing

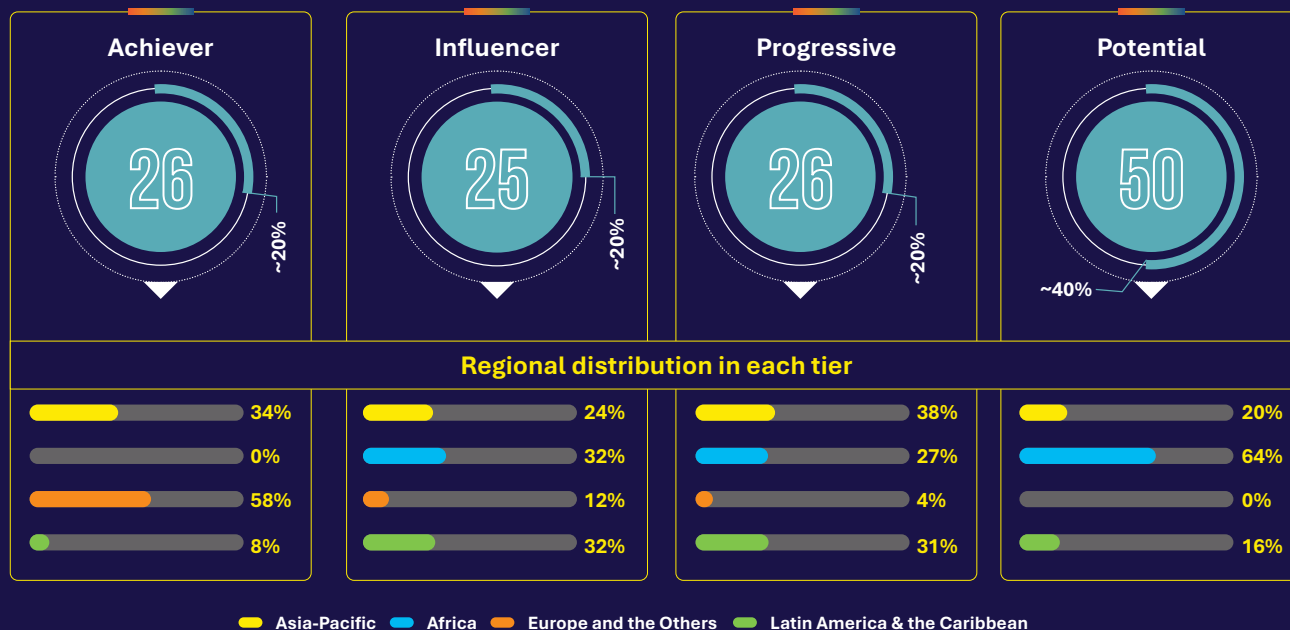
EoDS 2026 examines how solar deployment is increasingly shaped by the cost, debt tenor and currency of capital. Solar projects typically earn revenues in local currency but often rely on foreign-currency finance, creating currency mismatch and increasing financing risk. EoDS 2026 also highlights Distributed Renewable Energy

(DRE) as a key deployment pathway for expanding energy access, strengthening resilience and accelerating solar adoption in underserved markets. As a result, EoDS 2026 places greater emphasis on domestic capital mobilisation, foreign-exchange risk management and financing structures aligned with project revenues.

Global Classification of ISA Member and Signatory Countries



Distribution of ISA Member Countries across the 4 tiers



Shifts in country tiers compared with EoDS 2025

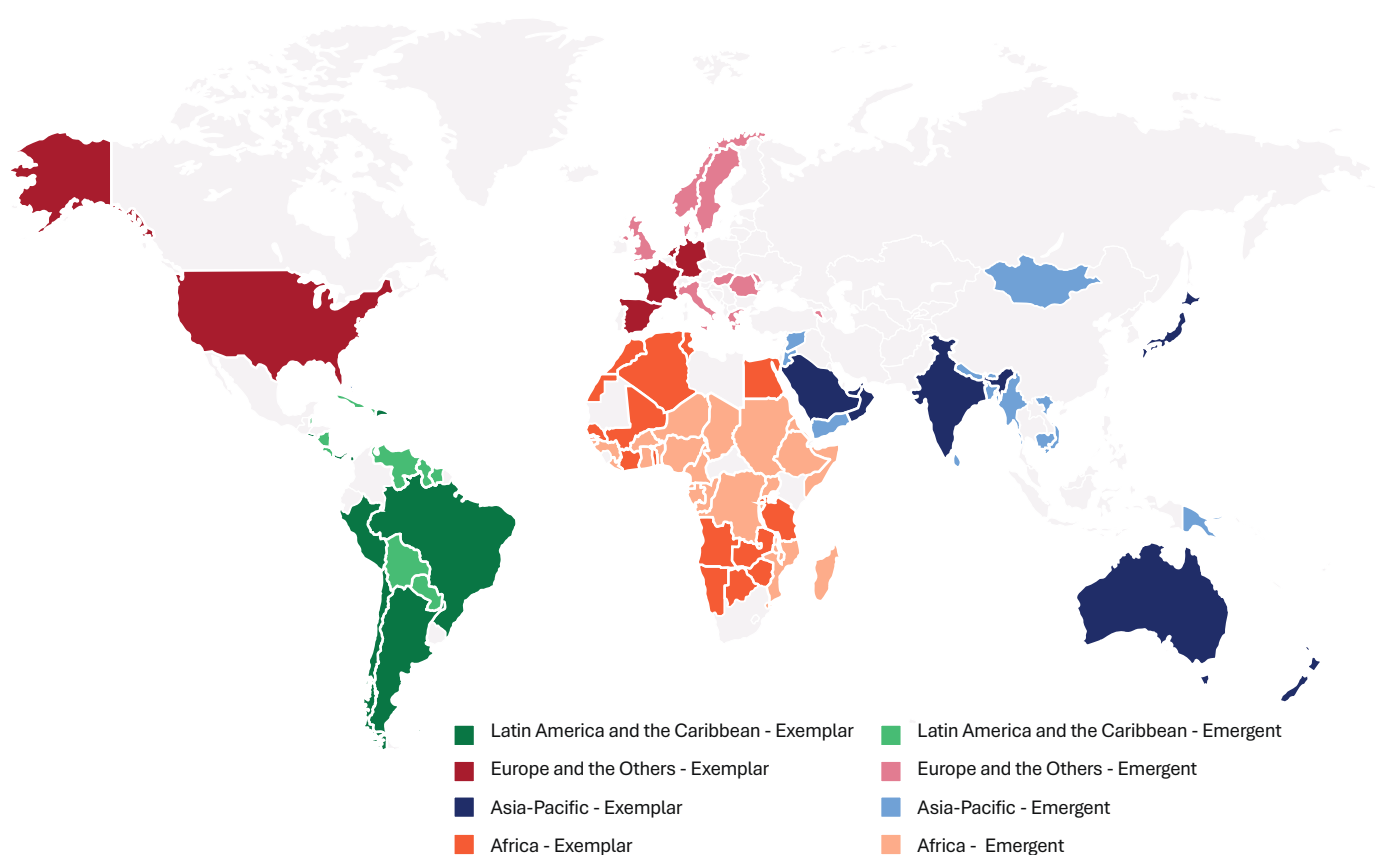


Note: To maintain meaningful differentiation and analytical relevance across countries, the EoDS 2026 classification thresholds were recalibrated. As a result, classifications should not be directly compared with those of previous editions

14 countries categorized as Achievers in 2025 retained that status in the 2026 edition

 Republic of India	 Commonwealth of Australia	 Federal Republic of Germany	 Federative Republic of Brazil	 Kingdom of Denmark
 Kingdom of Saudi Arabia	 Republic of Chile	 Republic of France	 Republic of Italy	 Spain
 Israel	 United Arab Emirates	 United Kingdom of Great Britain and Northern Ireland	 United States of America	

Regional Classification



Key Messages

Regional Peer Classification should be Institutionalised as a Core Implementation-Support Mechanism:

While none of Africa's 47 ISA Member and Signatory Countries qualify as Global Achievers, 18 emerge as Regional Exemplars, demonstrating that progress is better understood and accelerated through comparisons with countries facing similar financing, institutional, and market conditions.

Global classification shows overall progress, but regional classification reveals relevant pathways for improvement. None of ISA's 47 African members have qualified into the global Achiever tier, yet 18 of them are exemplars within the African region. Regional benchmarking therefore identifies leaders operating under more comparable financing, institutional and market conditions.

The African experience shows why these factors matter. Despite much of the continent receiving over 5 kWh/m²/day of solar irradiation, borrowing costs in many markets remain as high as 16–20%, compared with about 7–12% in Morocco, Senegal and Botswana. Outcomes also diverge sharply: solar contributes only 0.16% of electricity generation in Ethiopia, where the financing ecosystem remains limited, compared with 35% in Namibia, where a stronger ecosystem has emerged.

The binding constraint also differs by country. Uganda faces limited banking access; Sri Lanka uses local-currency power contracts but has high borrowing costs; Bhutan has few dedicated solar-finance products; and Mauritius faces a limited pipeline of bankable projects. Peer experience can point to targeted responses, from currency-risk cover in Morocco and local-bank participation in Chile to public finance mobilising private capital in Australia.

Regional classification should therefore move from benchmarking to implementation support. Identifying regional leaders by constraint can help countries adopt solutions already demonstrated in more comparable markets, making the EoDS classification a diagnostic framework not only for measuring progress, but also for translating peer experience into country-specific action.



Prioritize Local Currency Financing over the Pursuit of Universally Low Borrowing Costs:

With 81% of achievers using local currency power contracts, compared with just 4% of Potential Countries, the evidence shows that aligning repayments with domestic revenues, reducing currency mismatches and enhancing credit through robust institutions are often more critical than achieving the lowest financing rates.

India attracted approximately USD 21 billion in solar investment in 2025, with indicative utility-scale financing costs of 8.5–11.5%. Brazil attracted approximately USD 13.7 billion, with financing costs of 11–13.5%. Consistent policies and a reliable auction pipeline support India's investment growth, while Brazil benefits from an established solar market, supportive policies and domestic manufacturing. **Both examples show that substantial investment is possible without exceptionally cheap capital.**

South Africa provides a complementary example of local currency financing. Despite indicative country-level financing costs of 11–13.5%, the Kenhardt solar-plus-storage project secured approximately ZAR 12.4 billion in rand-denominated debt. A 20-year

Eskom PPA, standardised procurement and development-finance participation supported the transaction. Although the project's borrowing rate is not disclosed, it illustrates how predictable revenues and currency alignment can support financing in a relatively high-cost market.

Local currency finance should therefore not be equated with cheap finance. It aligns repayments with domestic revenues and reduces currency mismatch, but its overall cost depends on domestic interest rates and available alternatives. Lower borrowing costs remain desirable, but stronger payment security, suitable loan tenors and bankable project structures are equally important to mobilising investment.



Unlock Domestic and South-South Capital as the Next Frontier of Solar Finance while Redirecting Institutional Savings into De-Risked Local-Currency Solar Assets:

Leveraging capital pools such as Nigeria's pension funds (63% in government securities) and Kiribati's sovereign fund (330% of GDP) can help reduce financing costs and scale solar deployment.

Solar does not lack capital; it lacks the right placement and the right currency. Of the roughly USD 203 billion invested in solar across ISA Member Countries in 2025, USD 187 billion went to the 26 achiever countries, and the other 101 shared about USD 16 billion.

Many countries already have large pools of domestic savings, but very little of this money reaches solar projects. Over 63% of Nigeria's pension assets are held in government securities. Kiribati's sovereign fund is worth around 330% of its GDP. Mauritius has a financial sector worth about 500% of GDP, but under 1% of bank lending goes to renewables. What holds these pools back is investment rules and risk, not a shortage of projects.

Where risk is shared, domestic savings do follow. In Nigeria, an InfraCredit guarantee with first-loss support made ACOB Lighting's NGN 1.51 billion mini-grid bond safe enough

for local pension and insurance funds to buy. In the Philippines, six domestic banks came together on a USD 2.4 billion, 15-year loan for Terra Solar's 3.5 GW of solar and 4.5 GWh of storage.

South-South capital is the second frontier. Gulf countries invested more than USD 100 billion across Africa between 2012 and 2022. Saudi Arabia's ACWA Power has launched projects worth around USD 3 billion in Uzbekistan as part of a wider USD 10 billion programme. Infinity Power, an Egyptian Emirati venture, operates 1.3 GW of capacity across Africa and has around 3 GW under development. These investors bring more than capital. They understand currency risks, utility reforms and the practical challenges of delivering projects in similar markets. They also bring business models, such as pay-as-you-go solar, that have already worked in comparable economies.



Small-Scale Solar Investment rose 9% to **USD 245 Billion** while **Global Solar Investment** fell 12%:

Distributed solar's growing role in energy transition would continue to expand especially in the lower tier segments.

In 2025, small-scale solar attracted **USD 245 billion, up by 9% from USD 225 billion in 2024**, becoming the largest solar investment segment for the first time. Its role is particularly important in countries in the potential tier, where electricity access averages only 66.4%. **The SOLARISE Matrix, EoDS 2026, identifies nearly 60% of deployable applications as small-scale. Of the 13 applications ready to scale today, 10 are small-scale, making them the immediate priority for scaled deployment.**

Mini-grids, solar pumps and Pay-As-You-Go systems can bring electricity to households, farmers and small businesses without waiting for grid expansion. For instance, Rwanda increased household electricity access from 10% in 2010 to 72% in 2024, with around one-quarter of this access

coming from off-grid solar. India had similarly solarised **2.92 million agricultural pumps under PM-KUSUM by September 2026.**

Technology is therefore no longer the main barrier. The larger challenge is affordable finance that supports the small scale, local revenues and customer repayment patterns of distributed systems. Local-currency instalments, suitable loan tenors and targeted risk-sharing mechanisms can help turn local demand into investable projects.

Distributed solar should therefore be seen not as a temporary solution until the grid arrives, but as a scalable pathway to electrification. Its next phase will depend less on proving the technology and more on building financing models that can electrify/energise households, farms and businesses at scale.



Storage is Moving from a ‘Good-To-Have’ to a ‘Must-Have’ for making Solar Power Productive:

About 20% of SOLARISE applications requiring storage, and a 300-fold disparity in storage capacity between achiever (4.3 GW) and potential (12 MW) tier countries, storage and grid infrastructure investments must be planned alongside solar deployment to avoid curtailment, unlock investment and support round-the-clock clean power.

As solar penetration increases, storage is becoming critical to match generation with demand. While 75% of the applications in the **SOLARISE Matrix are deployable today**, the next 16 applications classified under Category O, including evening supply, round-the-clock industrial power and island microgrids, depend on storage solutions to become viable at scale.

Storage capacity, however, is concentrated in more advanced markets. Median energy storage capacity is approximately **4.3 GW in achiever countries, compared with 12 MW in potential countries**. The roughly 300-fold difference in median energy-storage capacity spans both operational assets and projects under construction or planned, indicating a substantial divide in existing infrastructure

and future development. Grid constraints are also becoming material: Botswana loses about 21% of power in transmission and distribution, while curtailment and congestion **reduced solar investment in Brazil by 22% in 2025**. Meanwhile, globally, solar-plus-storage investment reached a record **USD 17.2 billion in 2025**.

Storage and grids therefore need to be planned with solar, not after it.

Transmission typically takes 4-5 years to build, compared with around 2 years for solar. Planning storage and transmission alongside the solar pipeline, while creating mechanisms that value firm capacity and reliability, can enable both grid stability and higher-value uses of solar power.



The Transition that Matters is from Energy Dependence to Energy Sovereignty:

The Energy Transition Pathways demonstrate that countries with stronger economic fundamentals are accelerating solar deployment to diversify away from imported energy, while countries with limited fiscal space can use distributed solar and storage to strengthen resilience and reduce external vulnerabilities.

The 2026 West Asia crisis highlighted how energy security and financial resilience are deeply interconnected. Countries with high import dependence and limited fiscal flexibility face a double burden: rising energy costs weaken currencies, making solar investments more expensive. Resilience therefore depends on import exposure, financial flexibility and the energy mix, as illustrated by the Energy Transition Pathways framework.

Country experiences underscore this contrast. For instance, Australia, with domestic resources and greater financial flexibility, saw wholesale prices fall **30% to USD 49/MWh during the crisis. Singapore, despite its financial strength, generates 94% of its power from imported gas and saw prices exceed USD 156/MWh.** Niger, with high import dependence and limited financial

room, saw national supply fall 30–50% when electricity imports from **Nigeria dropped from 80 MW to 46 MW.** Ethiopia is less import-dependent, but drought can reduce hydropower output by 20–25%, while solar remains only around 15 MW.

Energy sovereignty must therefore become a core economic-policy objective. Although pathways will differ by country context, all require expanding domestic renewable energy, particularly solar, alongside stronger local financing ecosystems. Achiever countries demonstrate this alignment, with higher shares of local-currency PPAs and solar-based procurement than other country tiers.

The transition that matters is not only from fossil fuels to solar, but from imported energy dependence to domestically financed and locally anchored energy systems.



Conclusion

Solar's evolution is clear: generation was the priority yesterday, scale is the priority today, and storage is the priority next. Storage must therefore be positioned as the next frontier of solar deployment while leveraging distributed solar and local capital to accelerate the shift of solar growth towards Africa, LAC, SIDS, and

emerging markets. As solar adoption expands beyond traditional leaders and new demand sources such as data centres drive investment, global solar capital can become more evenly distributed, helping offset past investment imbalances and supporting a more equitable and resilient energy transition.

Energy Transition Pathways

Understanding the Energy Transition Pathways

- **Horizontal axis (Energy Sovereignty):** reflects the extent to which a country relies on domestic energy resources rather than external energy imports.
- **Vertical axis (Financial Flexibility):** reflects the country's economic capacity to mobilise investment and support long-term energy transition efforts.

Each country is represented by a coloured marker. The colour indicates the dominant component of its energy mix (petroleum and liquids, coal, natural gas, or nuclear/renewables and others).





Note: The framework is not a ranking. Instead, it provides context on the different transition challenges faced by countries and highlights that pathways to energy security and solar deployment will vary depending on resource availability, economic capacity, and exposure to external energy markets.

How to read: Countries are positioned based on their level of energy sovereignty (horizontal axis) and financial flexibility (vertical axis). The chart helps identify each country's transition context and highlights where solar deployment is likely to be most strategically important. The SOLARISE Matrix can then be used to determine which solar applications are most appropriate to prioritise.

SOLARISE Matrix

Understanding the SOLARISE Matrix

The SOLARISE Matrix is a decision-support framework that groups solar deployment opportunities according to their current level of readiness and the conditions needed for wider adoption. It helps identify which solar applications can be scaled immediately and which may require additional technological, market, financing or infrastructure support.

S Scale now: Proven and competitive today	Utility-scale PV parks	C&I open-access PPAs	Group captive PV for C&I users	Rooftop PV for C&I self-consumption	Residential rooftop PV with net metering	Agri-feeders	Water heating for homes and businesses	Rooftop PV for residential consumers
O Optimize: Competitive with right tariff	Data center	Carports with EV charging	Carports and canopies	Water utilities and Sewage treatment plant pumping	Brackish water desalination	Crop, seed and harvest drying	Rural mini-grids with productive loads	Cold storage systems (freezers, bulk milk chillers)
L Link with add-ons: Needs storage, grid or hybrid support	Evening peak supply	C&I peak shaving and backup supply	Mines - firm renewable supply	Industrial heating (below 150°C)	District cooling and heating	Cooking for institutional kitchens	C&I RTC supply	Island and remote 24-hour microgrids
A Advance selectively: Viable in specific markets	24/7 supply for data centres and crypto mining	EV charging (bus depot)	Industrial heating (150-400°C)	Green H ₂ feedstock for refineries and fertiliser	6-10 hour firm renewable supply	Agrivoltaics for dual-use farming	BIPV for premium buildings	Port electrification and shore power
R Reduce cost first: Needs cost decline or stronger offtake	Green ammonia for fertiliser and export	H ₂ -DRI for green steel	Industrial heating (above 400°C)	Methanol and e-fuels for shipping	Multi-day grid balancing	Offshore platform power supply	Vehicle-integrated PV	Dispatchable CSP bulk power
I Incubate: Long-term; keep testing	E-kerosene / SAF for aviation	Heating in high latitudes	Direct air capture powered by PV or thermal energy	H ₂ shipping				
S Standby: Monitor only; not mainstream	Hydrogen passenger mobility and home heating	Hydrogen-to-power						
E Evaluate later: not practical for near-term	Road-integrated PV surfaces	PV as primary propulsion for cars, aircraft, drones/eVTOL	Space-based power					

Note:

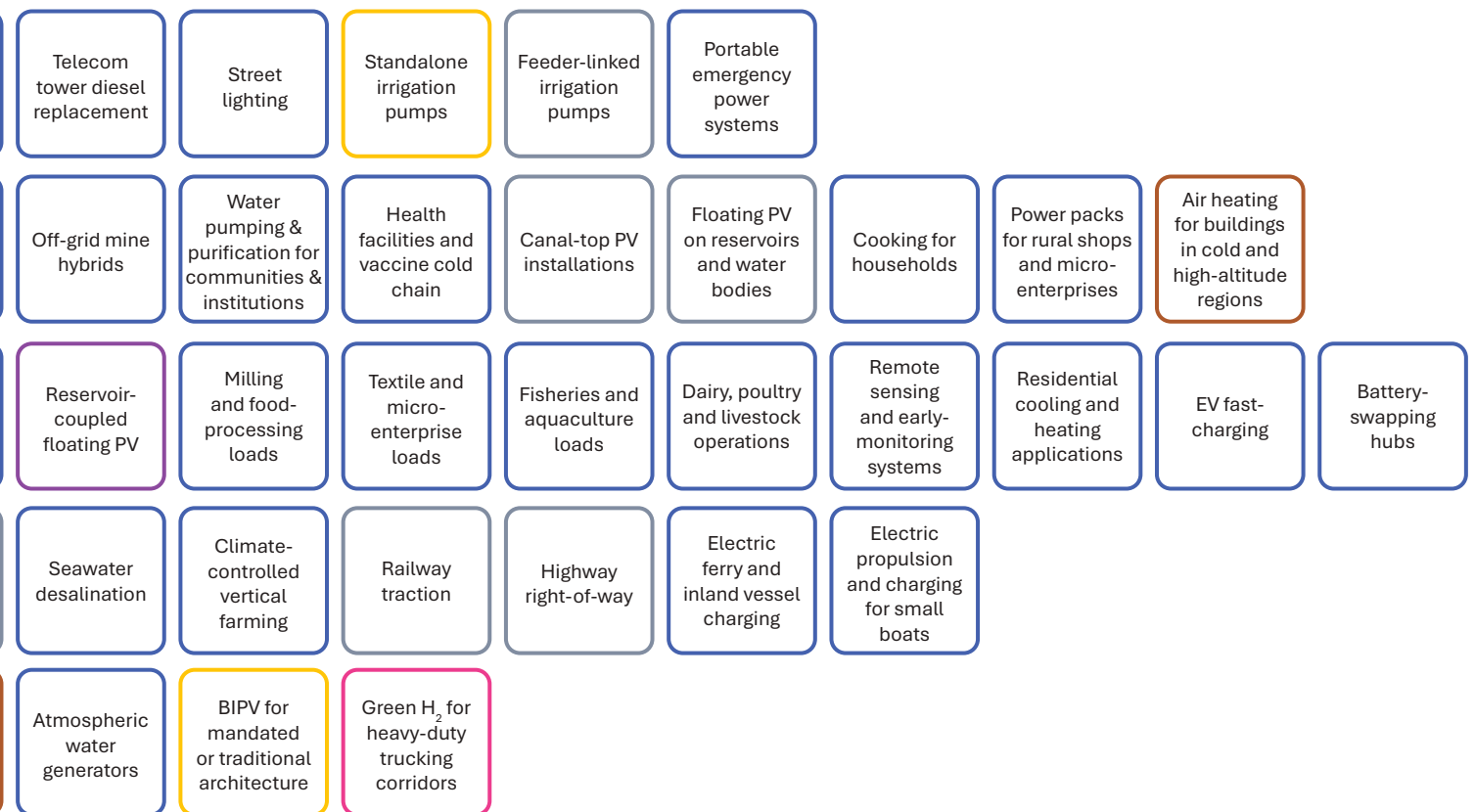
The matrix presents a curated set of representative solar-powered or solar-enabled applications, not an exhaustive list. Applications have been selected to cover major use cases across power generation, distributed energy, productive use, industry, mobility, storage, hydrogen and emerging technologies.

The placement of solar applications reflects the author's analysis of technical feasibility and macro-level deployment practicality. Actual positioning may vary by country depending on solar resources, grid reliability, tariffs, diesel prices, storage costs, the cost of capital, land availability, incentives, and offtake certainty.

Applications are Organised into Eight Readiness Levels:

Scale Now → Optimise → Link with Add-ons → Advance Selectively → Reduce Cost First → Incubate → Standby → Evaluate Later

The vertical position indicates the current readiness of the application, while the border colour indicates the primary system pathway most critical to its deployment, such as grid integration, battery storage, thermal systems, long-duration storage, hybrid systems or hydrogen pathways.



Each solar-based application below is positioned by technical maturity and practical feasibility; border colours show its primary system pathway — from direct daytime use to grid, storage, thermal, hybrid and hydrogen pathways.

- No additional system – direct daytime use
- Short-duration electrical storage (BESS)
- Long-duration balancing
- Hydrogen conversion pathway
- Grid interface & evacuation
- Thermal pathway – solar heat / CSP + thermal storage
- Hybrid renewable supply– solar + wind + storage

How to read:

The Matrix shows the relative readiness of different solar applications, from those that can be scaled immediately to those requiring further development or enabling conditions. Together with the Energy Transition Pathways chart, it helps identify not only why a country should accelerate its solar transition, but also which solar applications are most suitable to pursue first.



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