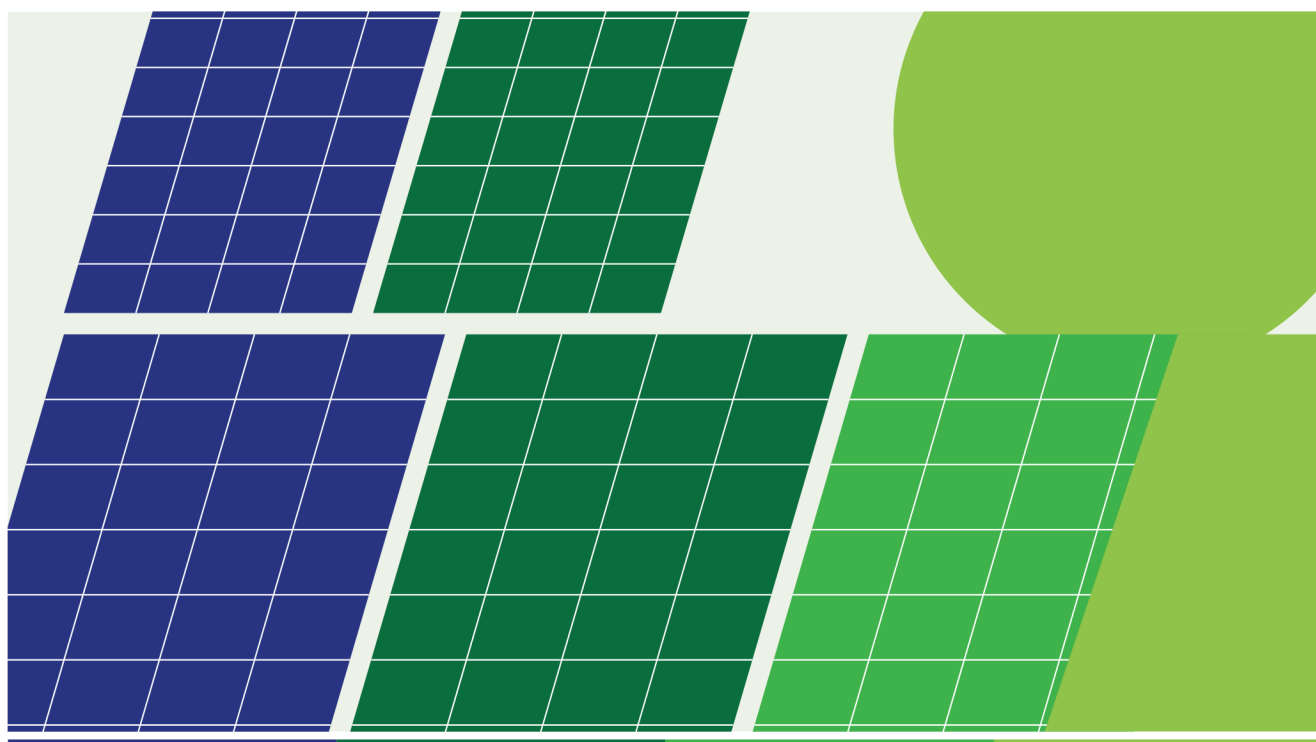


FROM

PRICE-TAKER TO PRODUCER

A regional strategy for Africa
in the solar value chain



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Summary

Africa is the fastest-growing solar market in the world and makes almost none of what it installs. This brief asks whether the continent can move from being a price-taker in that market to a producer within it. The answer is a qualified yes.

The largest gain from solar - cheaper, more reliable electricity, and the domestic firms that build, wire, install and maintain it - is open to every country regardless of national budget. Manufacturing the panels themselves is a narrower opportunity, viable for a few countries and only as part of a regional strategy: no single African market is large enough to reach competitive scale alone. The brief sets out what that strategy requires - fixing a specific defect in the African Continental Free Trade Area's rules of origin, financing utility-scale solar through multilateral wholesale lending rather than bespoke private deals and applying to every incentive a template of reciprocity that Africa's industrial policy has so far lacked. Drawing on the precedent of Korea, Taiwan and China's own solar and semiconductor industries, the brief argues that public support is only useful when it is conditional, time-limited and verified—including against who actually captures the resulting jobs and ownership, since an unconditional solar push is as likely to entrench existing social stratifications - gender inequality above all - as to close them.

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Highlights

- 01 Africa is the fastest-growing solar market in the world and makes almost none of what it installs.** About 12 GW of solar was added in 2025 and about 17 GW will be added in 2026, roughly twice what official statistics record. Nineteen out of every twenty panels come from China. This brief asks whether Africa can move from being a price-taker in this market to a producer within it and what needs to be done for that to happen.
- 02 Almost all of the recent growth has come from the part of the market the government has had no hand in.** Distributed solar—small systems installed on the rooftops of homes and businesses rather than large, centralized plants—is financed privately and mostly unregistered, and it added about 26 GW between 2023 and 2025. Utility-scale solar, the kind built under long-term contracts with a utility, fell to about 1.6 GW in the same period. The pattern is stark: the former, which needs no policy support, is booming; the latter, which does, is stalling.
- 03 Can Africa move from being a price-taker in the solar market to a producer within it? The answer is a qualified yes, and the qualifications matter.** The largest gain from solar is cheaper, more reliable electricity for the whole economy and the domestic firms that build, wire, install, and maintain solar systems. That opportunity is open to every country, including those with small budgets and small grids. Manufacturing the panels themselves is a narrower opportunity: a marginal business, held back by a stack of fixable frictions, that a few countries can make competitive and most should not attempt alone.
- 04 Who captures these gains is a design choice, not a given.** The jobs in wiring, installing, and maintaining solar systems, and the firms that do it sit in a sector where women are usually under-represented at every level from the workshop floor to ownership. Left alone, a solar push will reproduce that pattern. The reciprocity conditions this brief sets out treat a rising share of ownership, leadership, and skilled employment held by women as a condition of public support, not an afterthought.
- 05 The case for trying is stronger than it was a year ago.** The 2026 oil shock showed what dependence on imported fuel costs: diesel prices rose by a quarter in Kenya, by half in South Africa, and doubled in Malawi within a year. Solar is the cheapest source of new electricity across most of the continent, and it is paid for once rather than every month. The panels Africa imported in the year to June 2026 cost US\$2.4 billion; generating the same electricity from diesel would cost that every three months.

- 06 Finance is the binding constraint, and it is a policy choice.** In the African countries for which estimates exist, a privately financed solar project borrows at 20 to 45 per cent, against 3 to 5 per cent in Germany or the United States. Concessional loans to a government cost about 6 per cent. Which of these rates Africa builds its power system at is decided by governments and their lenders. Financing utility-scale solar project by project, with a fresh subsidy negotiated each time, treats a systemic gap as a one-off problem. The alternative is for development banks to lend wholesale, at their own cost of funds, for publicly owned generation, and leave the private-deal model to the distributed market that does not need it.
- 07 The strategy has to be regional.** No single African market is large enough to reach the scale at which panel manufacturing pays or to hold an investor to its promises. A regional compact, housed in institutions that already exist, can pool demand, fix the trade rules, share testing and finance, and make every unit of public support a contract with conditions attached.
- 08 There is one specific, fixable defect in the regional strategy: how the African Continental Free Trade Area (AfCFTA) classifies solar panels.** Cells and modules, the assembled solar panels sold to a project, currently share a tariff heading under the African Continental Free Trade Area, and since cells are more than half a module's value, assembling imported cells does not make a panel African under the rules of origin—so most African capacity gets nothing from the free-trade area it is supposed to benefit from. Renewables were also left out of the early rounds of the Guided Trade Initiative, the pilot under which goods move under AfCFTA's preferences. Fixing the tariff-heading rule, bringing solar into the Guided Trade Initiative, and funding customs verification are the three trade actions the rest of the strategy depends on.
- 09 African governments have mostly given incentives to attract investment, not to incentivise an upgrading commitment.** Korea, Taiwan, and China ran the opposite model: state support was conditional on export, quality, and performance targets and withdrawn when firms missed them. The template later in this brief applies that same discipline to every solar incentive, terms published before approval, and results published after.
- 10 Where to begin depends on which of three positions a country occupies.** Current established hosts—South Africa, Egypt, and Morocco—can upgrade what they already have. Countries with large, fast-growing distributed markets—Nigeria, Kenya, and Ghana—can build on that demand rather than chase manufacturing for its own sake. Everyone else—Burkina Faso, Madagascar, Malawi, and their peers—is better served by buying well, bonding their own contractors, and using regional institutions rather than trying to host them. Section 7 offers a short self-assessment for placing any country in one of the three.

01 A crossroads

African governments are being asked to employ the largest generation of young people in history, keep the lights on, and adapt to a changing climate, with less fiscal room than they had a decade ago.^{i,ii,iii} The three pressures arrive together, and each makes the others harder to manage.

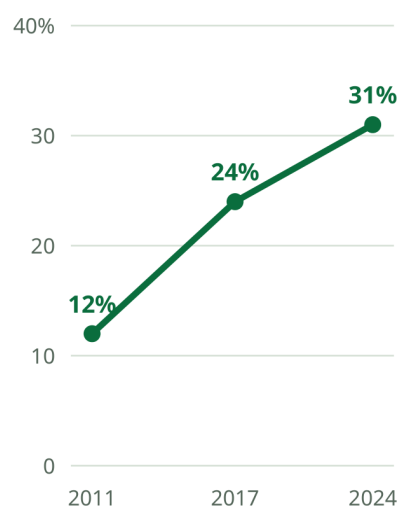
Debt comes first because it constrains everything else. External debt service costs consumed about 31 per cent of African government revenue in 2024, up from 12 per cent in 2011^{iv,v}. Twenty-three countries in sub-Saharan Africa are in debt distress or at high risk of it, nearly three times the number in 2014^{vi}. In 2021-23 African governments spent an average of US\$70 per person on interest payments, against US\$63 on education and US\$44 on health^{vii}. Governments have returned to the Eurobond market in 2026, but Kenya and Cameroon paid 8 to 9 per cent. Since 2020, African sovereigns have borrowed at an average of 9.8 per cent against 2.8 per cent for the United States^{viii}. Every tax holiday, customs waiver, and public guarantee offered to an investor has to be weighed against that arithmetic.

Jobs come second. Between 10 and 12 million young Africans enter the labour market each year against about 3 million formal jobs created^{ix}. Only about a quarter of new workers in sub-Saharan Africa find wage-paying employment^x. The pressure will grow: Africa's working-age population will rise from 892 million in 2025 to 1.56 billion in 2050, an increase of 667 million people, which is nearly nine-tenths of the net growth in the world's working-age population over that period^{xi}. Whether this is a dividend or a crisis depends on whether the jobs exist. These jobs, like most in energy and manufacturing, will not be shared evenly between men and women unless policy makes sure they are.

Climate comes third, and it is no longer a forecast. The World Meteorological Organization estimates that African countries lose 2 to 5 per cent of GDP a year to climate extremes, with some diverting up to 9 per cent of their budgets to respond^{xii}. The 2024 El Niño drought cut Southern Africa's cereal harvest 16 per cent below the five-year average, Zambia's by 43 per cent and Zimbabwe's by half.^{xiii} Output from the Kariba dam, which supplies the bulk of Zambia's electricity, fell by about 80 per cent, and load-shedding reached 20 hours a day^{xiv}. Several of the continent's grids depend on rivers that no longer run as they used to.^{xv}

Figure 1. Three pressures arriving together**DEBT**

External debt service as a share of government revenue, Africa

**JOB**

Per year, Africa. The working-age population grows by 667 million to 2050

10–12 million



Labour-market entrants

3 million



Formal jobs created

CLIMATE

The 2024 drought: harvests against the five-year average; Kariba against capacity

Decline (%)

Southern Africa cereal harvest



Zambia cereal harvest



Zimbabwe cereal harvest



Kariba dam power output



Sources: AfDB (2025; 2026); AfDB Jobs for Youth in Africa strategy; UN World Population Prospects 2024; WMO State of the Climate in Africa 2024; IMF (2025) on Kariba.

The trading environment has also become less predictable. The African Growth and Opportunity Act (AGOA), the United States' preferential access scheme for Africa, lapsed in 2025 and has been extended, most recently to the end of 2028, while a series of tariffs, court rulings, and replacement tariffs left the effective US tariff on sub-Saharan exports at about 8.5 per cent in early 2026 against near zero a year before^{xvi,xvii}. The European Union began charging for the carbon embedded in imported steel, aluminum, cement, and fertiliser on 1 January 2026.^{xviii} The African Climate Foundation estimates that the mechanism could cost the continent up to US\$25 billion a year in lost exports as it expands^{xix}. A growth model built on exporting raw materials produced with fossil power is losing its markets.

None of this is an argument for solar factories. It is the context in which any industrial policy will be judged: it must create jobs at scale, it must be cheap for the treasury, and it must reduce rather than add to the economy's exposure to fuel prices and carbon costs. Solar electricity meets all three tests. Solar manufacturing meets them only in specific circumstances, which the rest of this brief tries to identify.

02 What Africa brings

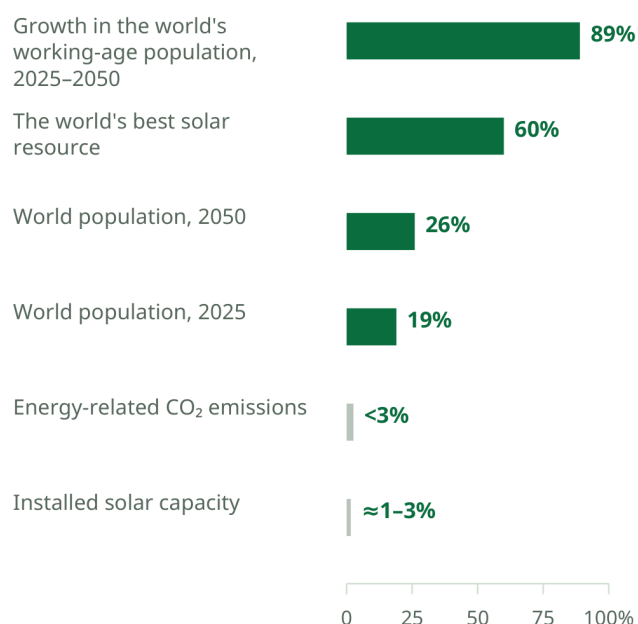
Africa has three assets that matter for this industry: people who will drive demand, the best solar resource on earth, and the minerals and land that a solar economy uses. The first two are decisive; the third is often overstated.

The demographic case is the one most often missed. Africa's population will grow from 1.55 billion in 2025 to 2.47 billion in 2050, about 64 per cent of all the growth in the world's population over that period. China's population will fall by 156 million and Europe's by 41 million^{xx}. More than half of all countries now have fertility below replacement, and China, Italy, Spain, and South Korea are below 1.4 births per woman.^{xxi} The IMF concluded a decade ago that, while the rest of the world ages, sub-Saharan Africa "will become the main source of growth for the global labour force"^{xxii}, and McKinsey estimates that sub-Saharan Africa alone could account for 18 per cent of all hours worked in the world by 2050, double its share today^{xxiii}. Markets elsewhere are saturating. The growth in global demand for electricity, and for the equipment that produces it, is going to be disproportionately African. A market that is growing while others shrink is worth something in a negotiation with the firms that supply it, and African governments have rarely treated it that way.

The solar resource is the second asset. The International Energy Agency puts 60 per cent of the world's best solar resources in Africa, against about 1 per cent of installed capacity when it made the assessment^{xxiv}. A panel installed in Africa produces on average 4.5 kWh a day for each kilowatt of capacity, against 3.9 in China and 4.2 for the world as a whole.^{xxv} A panel in Namibia produces about twice what the same panel produces in the United Kingdom^{xxvi}. Near the equator output varies little through the year, so less storage is needed. In Ethiopia, Zambia, Mozambique, and the DRC, the dry season that cuts river flows is the season of highest solar output. African demand is largely daytime demand for cooling, pumping, processing, and commerce, which is when the panels produce.

Figure 2. Africa's share of the world, and how its solar resource compares**Africa's share of the world**

Per cent of the world total

**Practical solar potential**

Long-term average, kWh per kWp installed, per day



Sources: UN World Population Prospects 2024 (medium variant); IEA Africa Energy Outlook 2022; IRENA (2026) and AFSIA (2026) for capacity; World Bank/ESMAP Global Photovoltaic Power Potential by Country (2020): long-term average practical potential; the UK value is derived from the report's statement that Namibia's potential is twice the UK's.

The third asset needs more care. Guinea holds the world's largest bauxite reserves. Mozambique and Ghana smelt aluminum. The DRC and Zambia produce the copper that goes into cables and transformers. South Africa, Namibia and the DRC mine zinc. These feed the metal-intensive parts of a solar project, which are also the parts most open to African suppliers. But no African country has a raw-material advantage in polysilicon, wafers, or cells. Polysilicon is made from quartz, which is abundant everywhere, and its cost is dominated by electricity and capital. Labour is a minor share of a module's cost and modern lines are automated^{xxvii,xxviii}. Cheap labour buys almost nothing in this industry, and cheap sunshine makes African electricity cheap without making African solar cells (the electronic devices that convert solar energy into electricity using the photovoltaic effect) cheap. Where Africa's endowment does matter upstream is in cheap, firm power: electricity is over 40 per cent of the cost of polysilicon, which is why a cell plant in Ethiopia can run on hydropower at under 3 US cents a kilowatt-hour and why Egypt can talk seriously about a solar-glass plant.^{xxix}

03 The boom that official statistics cannot see

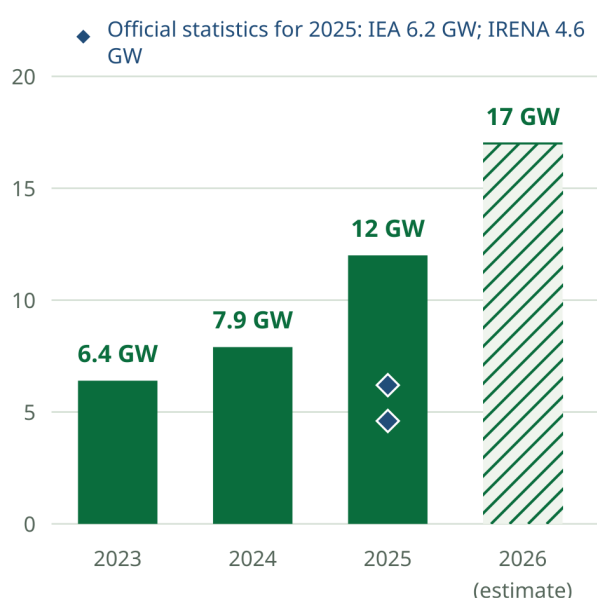
Almost overnight, Africa installed about 12 GW of solar in 2025 and will install about 17 GW in 2026, a third consecutive record and about two and a half times the 2023 rate. Most of it is invisible to governments.

The estimates come from Ember, an energy think tank, and the African Tech Futures Lab, who build them from Chinese customs data with a calibrated installation ratio, and they are about twice the official figures recorded by governments on the continent: the IEA records 6.2 GW for 2025 and the International Renewable Energy Agency (IRENA) 4.6 GW^{xxx}. Chinese exports of panels to Africa reached 23 GW in the twelve months to June 2026, up 53 per cent on the year before and nearly 150 per cent in two years (Figure 3). Cumulative imported capacity rose from about 8 GW in January 2020 to about 65 GW in March 2026^{xxxii}. Thirty-six of Africa's 54 countries are expected to set installation records in 2026, and nineteen grew by more than 100 per cent, including the DRC, Zimbabwe, Egypt, and Zambia. Six countries now add more than a gigawatt a year: South Africa (3.3 GW), Egypt (2.0), Nigeria (1.7), the DRC (1.7), Algeria (1.4), and Morocco (1.0).^{xxxiii}

Figure 3. Africa's solar market is growing faster than any other and about twice as fast as official statistics show.

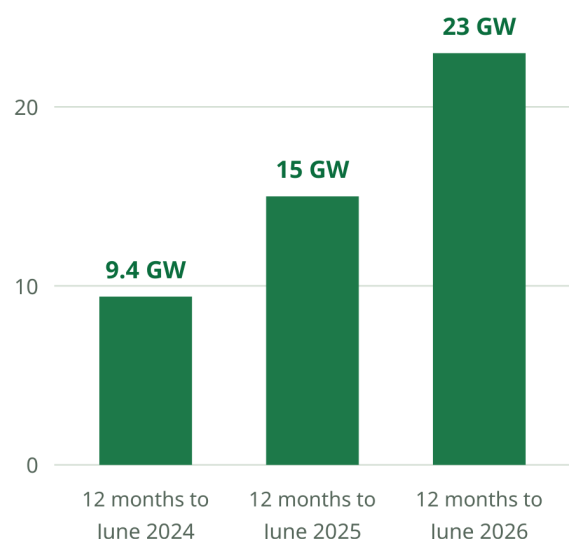
Solar added in Africa each year, GW

Ember estimate (bars); what official statistics record for 2025 (diamonds)



Chinese panel exports to Africa, GW

Chinese customs data; about three-quarters is installed within six months



Sources: Ember and African Tech Futures Lab (2026), 'The take-off in African solar that official statistics can't see'; Ember (2025); IEA (2025); IRENA (2026). 2023 and 2024 values are derived from Ember's reported growth rates of 25% and 51%.

Three features of this boom shape everything that follows. About three-quarters of the 26 GW added between 2023 and 2025 was distributed solar, most of it on the roofs of businesses with daytime loads and paybacks of two to five years, installed with little subsidy and, in most countries, without registration^{xxxiii}. Only 36 of 54 countries publish any solar capacity figure at all.^{xxxiv} A government cannot plan an industrial strategy, a grid or a tariff around demand it cannot see, and measuring the market is the cheapest item on any list of recommendations.

Utility-scale solar, the kind built by developers under long-term contracts with utilities, is meanwhile not growing at the same pace: satellite estimates put new utility-scale capacity at about 1.6 GW in 2025, lower than in 2024^{xxxv}. The distributed boom is a private response to expensive and unreliable grids.^{xxxvi} The public and project-financed segment is where finance is a binding constraint.^{xxxvii} And the boom is still small against the need. Some 600 million Africans have no electricity^{xxxviii}, and Africa's electricity demand is expected to grow about 5 per cent a year to 2027^{xxxix}. The IEA expects solar to outcompete every other source of new generation across the continent by 2030^{xl}.

We do not yet know what this boom will produce beyond the electricity. In South Africa, building 2 GW of solar plants generated about 17,500 job-years for South Africans, eight to nine job-years per megawatt^{xli}. Nigeria registered 370 new solar companies in 2025 alone. Since 2024 Africa has imported more dollars of batteries than of panels from China, which points to a second market forming behind the first.^{xlii} The industries that grow up around a technology being deployed at this pace, in installation, wiring, structures, finance, maintenance, and repair, are the spin-offs to watch, and they are the reason this brief treats deployment as the first industrial policy rather than a prelude to one. Localising even the panel-assembly stage of that industry is estimated to create up to 140,000 jobs a year by 2050^{xliii}. So we are yet to fully grasp the scale of solar energy installation on the continent, and also to appreciate comprehensively what this means for an African growth agenda. Largely undirected, and driven by individual markets, there is scope for untapped growth and deepened demand across the continent.

04 Chinese panels, unknown demand, and the double dividend

China makes more than 80 per cent of the world's solar equipment at every stage of the chain, and 94 per cent of the panels installed in Africa in 2026. That fact is the starting point for an African strategy, not a verdict on it.

China's dominance is recent and was built by industrial policy. Provincial governments offered land, power, and credit to solar PV production firms. State banks lent to solar firms in the tens of billions of dollars around 2010. The country developed a national feed-in tariff, which created a home market when the United States and the European Union imposed duties on exporting solar PV panels in 2012 and 2013.^{xliv,xlv} China now holds more than 80 per cent of manufacturing capacity at every stage and close to 95 per cent for polysilicon ingots and wafers^{xlvi}. A watt of module, which is a single connected assembly of photovoltaic solar cells that converts sunlight into direct current of electricity, cost about a hundred dollars in the mid-1970s and about ten US cents in 2026.^{xlvii} Africa is the beneficiary of that collapse in price: its electrification is being made affordable by decisions taken in Beijing, not in Abuja or Addis Ababa. This can change with clear policy direction.

First, any policy that raises the price of imported panels raises the cost of electrification for everyone. A tariff that protects a 200 MW assembly line taxes the 17 GW that the continent installs, and the arithmetic is unforgiving. The second is that the size of the addressable market is not known, and the case against African production is usually made as if it were. Africa is already buying 16 to 23 GW of panels a year, comparable to the Middle East and to Latin America.^{xlviii} If demand grows at half the pace of the last three years, the continent will be installing 35 to 40 GW a year by 2030, comparable to what the United States installs today. Nobody can say that a market of that size will be supplied entirely from China, and nobody should decide now that it will. The question is which parts of its African producers can serve competitively, and the honest answer varies by product, by country, and by segment of the market.

The frame that makes the question tractable is the double dividend. Solar pays twice. The first payment is the value added in the solar industry itself: making equipment, developing projects, building and installing plants, and maintaining them. The second payment is larger and less discussed: the electricity, and what an economy can do with it. Firms in sub-Saharan Africa report losing about 8 per cent of annual sales to outages and pay around US\$0.47 per kilowatt-hour to generate their own power with diesel, roughly three times a cost-reflective grid tariff^{xlix}. The continent runs a shadow power system of about 170 GW of diesel generators, 63 per cent of the size of its entire grid^l. Twenty-six economies in sub-Saharan Africa have more generator capacity than grid capacity.^{li} A solar policy that creates a few hundred factory jobs and raises the price of electricity for the firms that would have employed thousands has failed the second test, and it is the second test that matters most for growth.

Table 1. The three channels of value from solar, and what a finance ministry should look at in each

Channel	How value is created	What to examine
1. Productive use of electricity	Lower energy costs, fewer interruptions, and the refrigeration, processing, irrigation and machinery that reliable daytime power makes possible. The largest channel by far.	Cost and reliability against the real alternative (usually diesel or an interrupted grid); the other constraints that stop cheaper power raising output, such as equipment finance, transport, skills and customers.
2. Domestic solar businesses and suppliers	Local earnings from engineering, construction, installation, structures, cabling, distribution, maintenance and system integration. In South Africa about 60 per cent of a utility-scale project's cost is already spent locally.	Domestic value added rather than turnover; sustained employment rather than construction job-years; whether local firms can be bonded and financed to win the work.
3. Manufacturing and exports	Sales of panels, cells and components in the region and abroad. Today's exports are cells and panels made in Egypt, Ethiopia and Tanzania for the US market behind US tariffs on Chinese goods.	Competitiveness after support ends; imported-input dependence; trade-policy exposure. An order book that depends on a tariff set in Washington is a contingent liability.

Source: AGIPP main report; Energy for Growth Hub^{lii}; Ember and ATFL^{liii}; interviews^{liv}.

05 Geopolitics and the price of imported fuel

The 2026 oil shock made the case for home-grown electricity more sharply than any report could. Fuel is imported every month; a solar panel is imported once.

When the United States and Israel went to war with Iran at the end of February 2026 and the Strait of Hormuz closed, Brent crude went from US\$71 a barrel in February to a monthly average of US\$117 in April, the highest since 2022, and was back above US\$100 in September after attacks on Gulf tankers and refineries resumed.^{lv, lvi} Four years earlier the invasion of Ukraine had taken it to US\$123.^{lvii} Africa imports most of its refined fuel, and the effects on the continent were immediate and uneven (Figure 4).^{lviii} Kenya's regulator imposed the largest single-month diesel increase in at least 21 years in April, and pump prices in September 2026 were 27 per cent above a year earlier in dollar terms. South African diesel was 45 per cent higher. Ethiopia's daily diesel supply was reported to have halved. Malawi's pump price, already inflated by a currency crisis, doubled to US\$3.38 a liter, more than twice the world average. Senegal spent more than 245 billion CFA francs on fuel subsidies in the first eight months of the year to hold its administered price. Zambia suspended excise duty and VAT on fuel to keep the pump price flat.

Figure 4. Oil shocks reach African pumps quickly and land hardest where currencies are weak

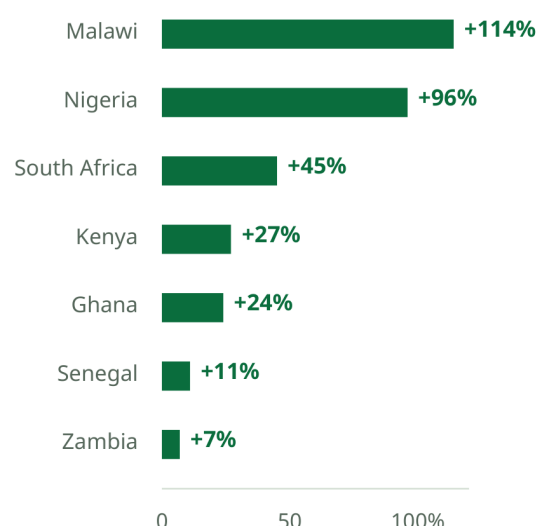
Brent crude oil, US\$ per barrel

Monthly average



Diesel pump price, change over a year

September 2025 to September 2026, in US dollars



Sources: US EIA via FRED (Brent, to August 2026); GlobalPetrolPrices.com, retail diesel on 14 September 2026 against a year earlier, converted at current exchange rates. Malawi's and Nigeria's increases include currency depreciation and the removal of subsidies.

The macroeconomic cost of these episodes is paid three times: at the pump, in the budget through subsidies and lost excise revenue, and in the foreign-exchange reserves that pay for the fuel. The 170 GW of diesel generators described in Section 4 are the part of the power system most exposed, and they are where distributed solar is displacing fuel fastest.^{lix} Ember estimates that the panels Africa imported in the year to June 2026 cost US\$2.4 billion and that generating the same electricity from diesel would cost that sum every three months^{lx}. A 420-watt panel retailing at US\$60 pays for itself in diesel savings in about six months of daytime use^{lxi}. Unlike a barrel of oil, a panel keeps producing for 25 years after it is paid for, and its price does not move with events in the Gulf.^{lxii}

This is not to say that solar removes energy insecurity. Batteries are still imported, and so are inverters and the panels themselves; grids still need firm power at night, and the utilities that supply it are in many countries insolvent.^{lxiii, lxiv} Section 9 returns to that problem. But the direction of travel is clear. Every gigawatt of solar installed converts a recurring, dollar-denominated, geopolitically exposed cost into a one-off capital cost that can be financed, and increasingly in local currency.^{lxv, lxvi} For a country deciding on installing utility-scale solar energy capacity, that is the difference between a bill and an asset.

06 The solar value chain and where African countries fit in it

The panel is the end of a long chain, and the chain is not where most of the value in a solar project now sits. Africa's realistic entry points are around the panel first and behind it second.

Quartz is refined into polysilicon in plants that consume enormous quantities of electricity and capital. Polysilicon is cast into ingots and sliced into wafers at a multi-gigawatt scale. Wafers are processed into cells, the most technologically demanding step. Cells are wired together behind glass in a frame to make a module, the step with the lowest barrier to entry and the thinnest margin; the cells are about half the value of a finished module, and the glass, frame, encapsulant, and assembly are the other half. Everything else in a solar plant, the mounting structures, trackers, cables, inverters, transformers, and switchgear, is called the balance of the system. Around all of this sits the work of developing, financing, building, operating, and eventually recycling projects, which is done where the plant is.^{lxvii, lxviii} Because panel prices have fallen so far, the balance of system, construction, and engineering are now the majority of what a utility-scale project costs: in South Africa local content rose from about 40 to about 60 per cent of project cost over a decade without a single locally made module, because the imported panel shrank as a share of the total^{lxix}.

Figure 5. The solar value chain: China's position, what entry requires, and where African production stands

Stage	China's share of world capacity	Capital and technology needed	Where African production stands today
Polysilicon, ingots and wafers	≈95%	Very high	None. One polysilicon plant has been proposed in Egypt and plans announced in Morocco.
Cells	>80%	High	Ethiopia (≈4 GW) and Egypt (≈2 GW): foreign-owned plants built to export to the United States behind US tariffs on Chinese products.
Module assembly	>80%	Moderate	Egypt, Tanzania, South Africa, Nigeria, Morocco: about 3.5 GW of output expected in 2026, a fifth of what Africa installs. Mostly foreign-owned.
Balance of system: frames and cables	varies	Low to moderate	Frames, cables, transformers and switchgear are made in South Africa, Egypt, Nigeria, Kenya and Ghana. No solar glass is made in Africa yet.
Project development and finance	low	Low	Established in a few markets. Local developers rarely hold the equity or carry the early risk.
Construction, installation, maintenance	low	Low	Strong local capability. Bonding and certification rules keep local firms out of utility-scale work. Little formal recycling.

Making the panel: capital-intensive, scale-sensitive and dominated by China (stages 1–3).

Everything around the panel: now most of a project's cost, and done where the project is (stages 4–6).

Sources: IEA (2022), Solar PV Global Supply Chains; Ember and ATFL (2026); AGIPP main report; interviews (2026). Shares change from year to year.

The bulk of Africa's cumulative installed solar capacity sits in South Africa and Egypt, with South Africa historically accounting for nearly half of the continent's total.^{lxx} However, rapid decentralised growth is shifting capacity towards countries like Nigeria, the DRC, Algeria, and Kenya^{lxxi}. There are four main uses of solar-powered energy in Africa:

- Commercial and industrial users and households: A massive share (estimated between 44% and 75% of recent deployments) is driven by informal or private rooftop arrays, commercial buildings, and residential setups.^{lxxii} In places like Nigeria, roughly 96% of installations happen outside formal utility.^{lxxiii}
- Off-grid communities and mini-grids: rural and peri-urban areas use solar home systems and mini-grids to bypass weak or non-existent national transmission lines.^{lxxiv,lxxv}
- Diesel replacement: paired battery storage is heavily utilised by businesses and homes as reliable backup or replacement for expensive, unreliable diesel generators during power cuts (Ember).^{lxxvi}

- State utilities: In established markets, like South Africa and Egypt, utility-scale solar farms still play a structural role in feeding the national grid to diversify the energy mix away from coal and natural gas.^{lxxvii, lxxviii}

What can African countries do to capture the opportunity presented by solar energy? Moving from price-taker to producer

Individual African countries lack the critical mass in technological capability, capital, and domestic market size to compete with global manufacturing giants. A successful approach is presented by industrial policy itself.

A brief primer on the value of industrial policy is useful.

Relying solely on free-market dynamics to govern the energy transition effectively locks developing economies into the structural trap of remaining commodity price-takers. Industrial policy is therefore required because markets, while highly efficient at optimising existing supply chains, systematically fail at coordinating the massive structural transformations required to build new ones.^{lxxix}

Overcoming the first-mover penalty

Free markets under-invest in establishing new manufacturing hubs due to severe coordination failures.^{lxxx}

- Solar assembly plants need reliable ports, specialised logistics, and a trained workforce.^{lxxxi}
- A specialised logistics firm will not invest without a guaranteed volume of solar exports.
- A workforce will not upskill without existing factories to hire them.

No single private actor has the capital or authority to solve this ‘chicken-and-egg’ problem. Industrial policy allows the state to absorb the initial risk, coordinate the simultaneous development of infrastructure and skills, and provide the demand certainty (via public procurement or off-take agreements) needed to crowd in capital.^{lxxxii}

Escaping the “price taker” trap

Without state intervention, comparative advantage dictates that African nations export raw critical minerals—like copper and lithium—and import finished solar modules. These structural dynamics drain foreign exchange reserves and outsource the highest-margin economic activities. Strategic industrial policy forces the localisation of value addition. By leveraging mechanisms within the African Continental Free Trade Area (AfCFTA) and applying targeted export tariffs on raw minerals, governments can compel global firms to move midstream processing and final assembly closer to the resource base, transforming the economy from a price taker to a producer.

The multiplier effect of capital deployment

The capital required to connect 600 million people to electricity is vast.^{lxxxiii} If this capital is spent entirely on imported hardware, the economic impact is limited to the direct benefits of electrification. Industrial policy ensures that this massive capital outlay does double duty, as described earlier. By directing that expenditure toward locally assembled panels and batteries, governments capture the economic

multipliers - creating sustainable manufacturing jobs, developing a skilled technical workforce, and broadening the industrial tax base.^{lxxxiv}

How can African countries use industrial policy to take advantage of the solar energy boom?

To capture the dual opportunity of industrialisation and universal energy access, African policymakers must shift from fragmented national efforts toward a coordinated regional approach.^{lxxxv}

Build a regional manufacturing engine

Three main areas of industrial policy are relevant:

- A successful industrial policy requires utilising arrangements such as the AfCFTA to build regional supply chains - linking countries that mine critical minerals with those developing industrial assembly hubs.^{lxxxvi}
- Targeted assembly and processing are essential. Thus, rather than immediately attempting highly complex solar cell fabrication, industrial policy should target downstream solar PV module assembly and midstream mineral processing.^{lxxxvii} Between 2022 and 2024, Africa imported over \$12 billion in solar and transition technologies.^{lxxxviii} Localising the assembly segment alone is projected to create up to 140,000 jobs annually by 2050^{lxxxix}.
- And thirdly, governments can drive industrial growth by aggregating demand.^{xc, xci} By mandating local content requirements in large public utility tenders, and providing tax incentives for private commercial developments, states provide the revenue certainty required to attract factory investments.^{xcii, xciii}

Electrifying the 600 million

This will require scaling distributed renewable energy (DRE).^{xciv} Extending legacy centralised grids to remote populations is too slow and capital-intensive. Connecting the remaining 600 million people in Africa without electricity requires prioritising off-grid solar home systems and community mini-grids as the primary infrastructure.

It will also require mobilising catalytic capital. Major targets like the African Development Bank (AfDB) and World Bank's "Mission 300" which aims to connect 300 million Africans to electricity by 2030, rely on mobilising private capital for DRE.^{xcv} Policies must establish and scale specialised financing vehicles such as the \$300 million Zafiri Investment Facility, launched by the IFC, Rockefeller, and AfDB, to provide equity and de-risk operations for local distributed energy developers^{xcvi}.

Further, industrial policy can be extended to subsidising digital infrastructure. Modern decentralised grids require digital backbones to manage real-time supply and demand, reduce system losses, and handle micro-payments.^{xcvii} Treating digital infrastructure as a core utility enables off-grid developers to operate efficiently and attract further investments^{xcviii}.

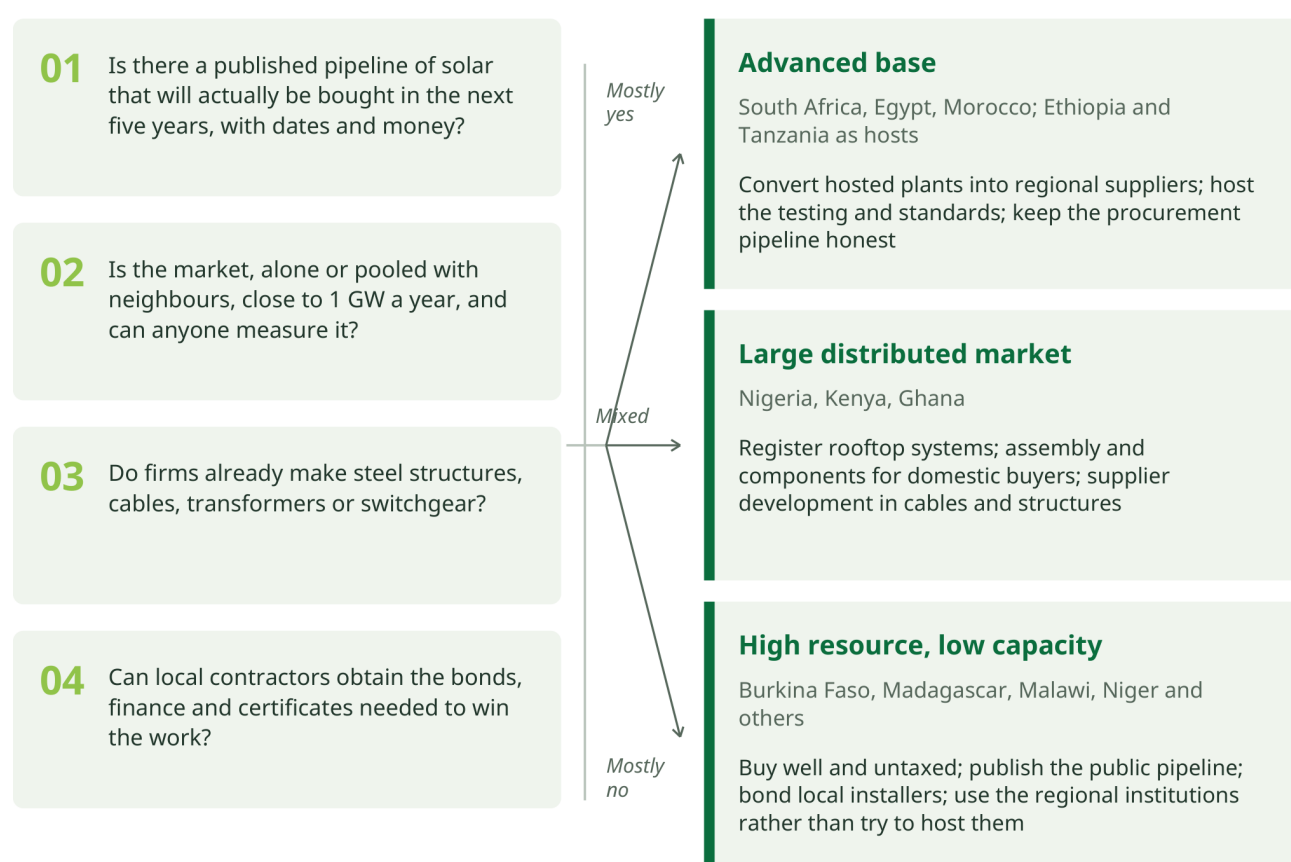
07 Which industrial policy tool to use where?

Approaching industrial policy requires moving away from isolated interventions toward a cohesive sovereign strategic investment roadmap. Because fiscal space is often constrained, governments must rigorously select tools that match their specific economic geography and institutional capacity, validated through deep stakeholder engagement. The World Bank's recent review of industrial policy proposes three tests for choosing instruments: market size, implementation capacity, and fiscal space. Applying this to solar, we are able to sort the continent into three starting positions, each with a first move that costs little and a mistake that costs a great deal. The ten questions in Table 2 are the self-assessment. Fig. 6 shows how the answers map to the positions.

Figure 6. Four gating questions, and the three starting positions they lead to

Four questions to answer honestly

Three starting positions



A country that answers 'partly' to most questions usually belongs in the middle lane. Section 7 sets out the first moves and the mistakes to avoid for each position.

Table 2. A ten-question self-assessment for a ministry considering solar production

No.	Question	What the answer tells you
1	How much solar was installed in the country last year, including on rooftops, and how do you know?	If the answer relies on utility data alone, the market is probably twice what you think. ^{xcix} Registration of distributed systems is the first policy act in every position.
2	Is there a published, funded pipeline of public and utility solar purchases for the next five years, with dates and products?	Manufacturers invest against orders, not targets. ^c Without a pipeline no incentive will attract a plant that stays; with one, an assembler may not need an incentive at all.
3	Is the market, alone or pooled with neighbours through a power pool or the African Continental Free Trade Area (AfCFTA), near 1 GW a year?	Below roughly 1 GW of sustained demand a module line runs at low utilisation and stays uncompetitive. Below it the answer is regional or nothing.
4	Do domestic firms already make steel structures, cables, transformers, switchgear or glass?	If yes, the near-term opportunity is supplier development into solar projects, which needs qualification and orders rather than subsidy. ^{ci,cii} If no, start with installation and services.
5	Can local contractors obtain performance bonds, working capital and certification to bid for utility and public work?	If not, local content rules will be met on paper by foreign firms. Bonding guarantees and a route to certification are cheaper than a factory and create more jobs.
6	Is industrial power reliable enough to run a factory that laminates at controlled temperature?	A module line that loses power loses the batch. Firm supply to designated sites is a precondition, not a benefit, of manufacturing. ^{ciii}
7	What is the cost of capital for a solar project in the country, and in what currency?	Above about 15 per cent in dollars, utility-scale projects will need public finance whatever else is done (Section 9). Local-currency finance changes the answer. ^{civ}
8	Can customs verify where a product was made and administer origin rules?	Without verification, preferences reward relabelling of Chinese panels. Verification capacity comes before any preference.
9	Would a factory locate here without the incentive being offered, and what is its dependence on a single export market?	If the plant is coming for cheap power and a port, the tax holiday is a gift. If its customers are all in one country, its order book is a contingent liability of yours.
10	Have you written down what the state will get in return for any support, by what date, and what happens if it is not delivered?	If the answer is no, the country is not ready to offer support, whatever the answers to the other nine.

Source: AGIPP; adapted from Fernandes and Reed^{cv} and the project's interviews^{cvi}.

For the advanced base, the work is conversion and hosting. South Africa has the continent's deepest structures, tracker, electrical and engineering base and its only serious module-testing facilities. That

makes it the natural host of the certification chain: the independent testing of modules against international standards, and the insured 25-year warranty behind them. Lenders require both before they will finance a plant built with a given module, so without that chain African-made panels are shut out of utility-scale projects whatever their price. South Africa is also the obvious regional buyer for the new cell and module plants in Egypt and Tanzania. Those plants were built to export to the United States, where tariffs on Chinese goods gave African output a price advantage, and South African orders would give them a customer who doesn't depend on a single country's trade policy. Its own lesson is about demand: the factories that closed after procurement stalled were killed by uncertainty rather than by China, which is why keeping to the masterplan's 3 to 5 GW a year matters more than any tariff. Egypt and Morocco already run the incentive packages the rest of the continent is tempted to copy; their next step is to make hosted capacity durable through local glass, frames and cells sold into African projects, and to negotiate the technology-transfer terms the equipment owners have so far not been asked for. The mistake to avoid is a subsidy race with neighbours for a plant that will locate on demand and logistics anyway.

For the large distributed markets, the entry is through the customer. Nigeria's assemblers sell to buyers who value local stock, local-currency finance, fast replacement and a warranty that can be enforced in Lagos. Ghana's firms are acquiring capability in cables and mounting structures through links with foreign developers^{cvii}. The ladder runs from public procurement and rooftops, where the bankability gates do not bind, to utility tenders once certification and warranty cover exist. The first policy act is to register the distributed systems and give their owners a formal route into the market. The mistake to avoid is an import ban or tariff on the modules the boom is buying, or content thresholds customs cannot verify.

Countries with strong sun but thin industrial and state capacity, such as Burkina Faso, Madagascar and Malawi, should not try to build a module industry. They gain most by buying solar cheaply, installing and maintaining it with local firms, and relying on continental institutions for what they cannot provide alone. That means three steps, in this order. The first is to say no. Investors will ask for a tariff on imported panels, a tax holiday for their plant or a local-content mandate, often terms they have already won elsewhere. The four accounts set out in Section 8 cover value added, foreign exchange, fiscal cost and the effect on electricity prices, and they will show that these deals rarely pay. Where power is scarce and expensive, anything that makes imported equipment dearer slows electrification. Cheaper, more reliable electricity is the larger of solar's two dividends, and it is the one these countries can actually capture. The second step is to use the state's own purchases as the industrial strategy. A published, multi-year schedule of the solar the government will buy for clinics, schools, water pumps and rural connections gives local firms an order book they can borrow against. The panels will be imported, but local firms can supply the mounting structures, poles, cabling, civil works and installation. They can only win that work if they can be bonded, meaning they can obtain the bid and performance bonds that public buyers require. These are guarantees from a bank or insurer that the contractor will finish the job or pay compensation, and small firms rarely qualify for them. A government does not need its own guarantee agency to fix this: membership of the African Trade and Investment Development Insurance agency (ATIDI) gives its firms access to that cover. The third step is to join the continental systems rather than host them. That means adopting the regional standards, accepting certificates issued elsewhere, reporting data to the continental observatory, and applying the AfCFTA rules of origin so that cables and structures made at home count as African wherever the module is assembled. A realistic five-year goal has four parts:

- an electrification programme made cheaper by untaxed equipment
- local contractors who win public work because they can be bonded
- a supplier base in structures and cabling that grows with the installed base
- a seat at the institutions that decide whether an African-made module can be sold across the continent

08 Industrial policy for green industries, and why it has to cross borders

Industrial policy is back in fashion. Much of what is proposed for African solar, tariffs and tax holidays for panel factories, is the expensive kind. The kind that fits the evidence is cheap, shared, conditional and regional.

The case for industrial policy is specific rather than general. Markets under-invest in the things that make a new industry possible: learning that spills over to competitors, shared skills and standards, supplier networks, and information about what a country can competitively make. The state can coordinate those investments and share the cost of discovery^{cxviii}. The risks are equally specific: capital tied up in activities that stay expensive, rents captured by the well connected, and input prices raised for everyone else.^{cxix} A London School of Economics (LSE) white paper on sustainable industrialisation makes the further point that African industrialisation in this century will not look like East Asia's in the last, and that what can be borrowed from East Asia is a way of making policy, adaptive, consultative and transboundary, rather than a template^{cx}. Both cautions apply with force to solar.

East Asia's experience is still the relevant precedent, because the industry that most resembles solar in its economics is semiconductors. The transistor and the integrated circuit were American inventions whose first customer was the US government, which bought most of the world's chips in the early 1960s at prices no commercial buyer would pay^{cx}. Manufacturing then moved to the accessible rung first: Fairchild opened an assembly plant in Hong Kong in 1961, Singapore followed, and Malaysia's Penang zone won Intel's first offshore plant in 1972.^{cxii, cxiii} None of those governments could afford a chip fabrication plant. They offered export zones, trained workers and a quality culture that met the foreign buyer's specification.^{cxiv} Korea then moved up by making support conditional: the state directed bank credit to the large business groups on condition that they exported, and firms that missed targets lost access to credit^{cxv}. Taiwan built institutions rather than firms, spinning TSMC out of a public research institute in 1987 with the state holding close to half the capital^{cxvi}. Five lessons carry over. Entry happened at the accessible rung. The state created demand and patient credit before it protected anyone. Support was reciprocal, given against export, quality and performance targets and withdrawn when they were missed. Quality standards were the ticket into global supply chains, and governments built the institutions that produced them. And it took decades.

Solar's own history follows the same pattern. Japan built the first mass market with a decade of rooftop subsidy from 1994 and its electronics firms became the world's largest producers. Germany created the largest market of the 2000s with a twenty-year feed-in tariff that was neutral about where equipment came from, and the producers that grew fastest on German demand were not German.^{cxvii} China entered through assembly for export and became dominant through the sequence of policy described in Section 4^{cxviii}. In every case public policy created a home market, supplied patient finance, set standards and demanded performance in return. A recent and widely read argument holds that Africa's low population density and lack of anchor economies put this route out of reach^{cxix}. For solar this is wrong in an

instructive way: cell and module plants are not labour-intensive and do not need dense populations. They need demand, credit, standards and a few well-chosen sites, which a continent can organise regionally by agreeing to specialise rather than each building a full national chain.

The African experience to date has largely been support without reciprocity. Incentives have been granted to attract an investment rather than to secure an upgrading commitment, and the commitments that are made are rarely verified or enforced. The remedy is a template that every solar incentive has to follow, and it is the discipline a finance ministry can apply immediately.

What the state gives, and what it gets in return

The state gives, in this order: public inputs (registration and data, industrial power, ports and customs, testing capacity, skills); targeted finance (working capital, guarantees, demand aggregation, procurement); time-limited learning support (production incentives paid on certified output, accelerated depreciation, a procurement preference); and only last, with the highest burden of proof and a ceiling on the effect on electricity prices, tariffs, content rules or tax holidays.^{cxx}

In return the firm commits to, and is measured on: certified output, paid per megawatt produced rather than per megawatt of capacity installed; a published cost gap to imports and a dated path to close it; customer diversification, with a ceiling on dependence on any one destination's trade policy; supplier development, with local frames, glass, cables and structures on a schedule that rises as qualified regional supply appears; technology-transfer terms, through joint ventures with binding clauses on process technology; workforce progression, including domestic engineering and management functions, and a rising share of ownership and leadership held by women, tracked and reported with the same seriousness as the other conditions; and transparent annual reporting of output, utilisation, value added, exports and customer concentration.^{cxxi,cxxii}

The support carries a review date written into law, a cap on total fiscal exposure and a pre-legislated clawback for a plant that leaves or misses its targets. Continuation depends on published evidence rather than on the calendar: automatic termination can end a promising learning process too early, and extension without evidence is a subsidy to losses^{cxxiii}.

Before approval, the finance ministry publishes four accounts: domestic value added (wages, local purchases and retained profit, not turnover); net foreign exchange (after imported inputs, equipment, debt service and repatriation); net fiscal value (all grants, tax expenditures, subsidised land and power, expected guarantee losses and infrastructure, against expected revenue); and the effect on the price and reliability of electricity for every other user. A plant that is viable only under permanent protection, or that slows electrification, fails.

One point of design deserves care. It is tempting to require every assembler, as a condition of support, to begin making the cells it imports by a stated date. The evidence argues against that as a universal condition. Cells are the hardest step; India has not managed it at scale on a market twenty times the size of any African one; and a condition that cannot be met is a condition that will be waived, which teaches every subsequent investor that conditions are negotiable. The better rule is to set conditions at the rung the plant can actually reach supplier development in frames, glass, cables, and structures for every assembler; a cell line or a joint venture only where the self-assessment in Section 7 says the demand and the power exist. It is better to set a condition that can be enforced than one that sounds ambitious and will be waived.

Conditions bind only where demand is pooled, which is why the strategy has to be regional. A single country has little leverage over an investor who can move next door; a region does. The threshold at which component manufacturing pays, roughly 1 GW of sustained annual demand, is reachable by South Africa, Egypt, and perhaps Nigeria alone, and by everyone else only together. The AfCFTA is the instrument for this, and it currently has a defect that matters cells and modules share a tariff heading, and cells are more than half of a module's value, so assembling imported cells does not make a panel African under the rules of origin, and most African capacity gets nothing from the free-trade area. Renewables were also left out of the early rounds of the Guided Trade Initiative, the pilot under which goods actually move under the agreement's preferences. Fixing the product-specific rule so that African value accumulates across borders, bringing solar goods into the initiative, and funding customs verification first are the three trade actions on which everything else depends. The African Union (AU) Assembly adopted the negotiated rules of origin in February 2026, which makes this the moment to raise it.

The regional compact this project proposes is a set of seven commitments that governments make to one another, in the order the evidence supports. The first five are cheap and shared; the sixth builds credibility for the segment where it is needed; the seventh applies to everything.

- 01 Measure the market.** A continental observatory of installations, imports, factory output, utilisation, prices, employment and supplier capacity, fed by national registration of distributed systems, reporting the gap between Chinese exports and African output until it closes. The African Trade Observatory run by the AU Commission and the International Trade Centre already exists and could host it.
- 02 Make the AfCFTA work for solar.** Fix the tariff-heading rule so that African value cumulates for solar goods, bring solar into the Guided Trade Initiative, and invest in customs verification first.
- 03 Publish and pool demand.** Every utility and public buyer publishes a multi-year equipment procurement schedule; the power pools and the AfCFTA Secretariat aggregate them; an approved list gates public and concessional purchases on quality and origin rather than a tariff.^{cxxiv, cxxv}
- 04 Finance the inputs.** A revolving input-finance and letter-of-credit facility for qualified African assemblers and component makers, hosted where the trade-finance mandate already sits, at Afreximbank and the Trade and Development Bank.
- 05 Fix the factory's operating conditions.** Bonded warehousing, pre-clearance and port dwell-time reform for manufacturing inputs; firm industrial power written into zone agreements instead of tax holidays; supplier qualification for the frame, cable, junction-box and glass tier; artisan training tied to contracts; and a bondable-contractor guarantee so local firms can win 60 per cent of the project cost that is already local.
- 06 Build credibility for the utility segment.** Accredited testing capacity, mutual recognition of certificates, an African tropical-grade performance standard, and a public first-loss layer behind commercial warranty cover, most naturally through Afreximbank's insurance

subsidiary with a reinsurer, so that eligible African producers can sell into project-financed plants.^{cxxvi}

07 Make every unit of support a contract. The template above is applied to every solar incentive, with the four accounts published before approval and results published after.

Who houses the compact is a fair question, and the answer should not be a new institution. The trade commitments belong to the AfCFTA Secretariat, which has the mandate and the rules-of-origin machinery. The finance commitments belong to Afreximbank, the Trade and Development Bank, and the AfDB, which have the balance sheets. The data commitment belongs to the African Trade Observatory. What is new is the agreement among a first group of governments to bind themselves to the seven commitments and to the four-account test, and that is a political act rather than an administrative one. The Addis Ababa Heads of State meeting in early 2027 is the place to make it.

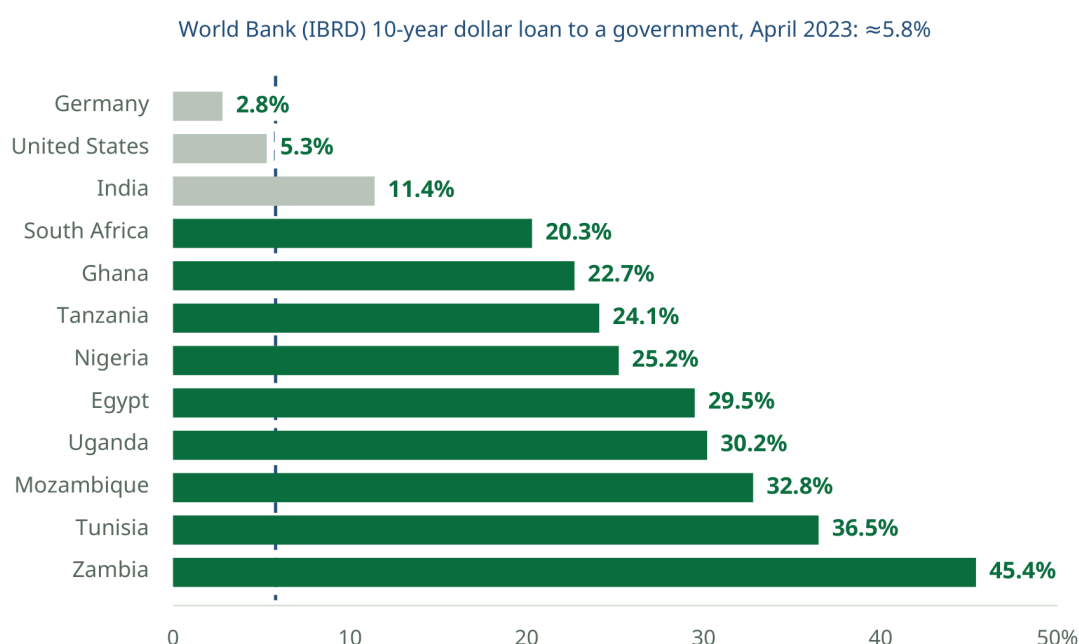
09 The financing challenge, and what can be done about it

The cost of capital, not the cost of technology, is the obstacle to solar at scale in Africa. Reducing it is possible, but not by any single instrument, and not without a larger public role than the current model allows.

As Rabah Arezki observed in the Financial Times in July 2026, a solar plant in the Sahel and one in southern Spain use much the same equipment, and the African one has more sun.^{cxxvii} The African plant's electricity will still cost more because of what it costs to borrow the money to build it^{cxxviii}. The Climate Policy Initiative's estimates for early 2023 put the cost of debt for a privately financed solar project at 2.8 per cent in Germany, 5.3 per cent in the United States, 20 per cent in South Africa, 25 per cent in Nigeria and 45 per cent in Zambia (Figure 7).^{cxxix} The IEA finds that the cost of capital for clean energy in Africa is at least two to three times what it is in advanced economies and China, and that in Kenya and Senegal the country risk premium alone is 60 to 90 per cent of the financing cost, against 10 per cent in a rich country^{cxix,cxxxi}. Currency mismatch adds five to six percentage points, and local-currency financing can cut the cost of solar electricity by 20 to 29 per cent^{cxxxii}. Some of this premium reflects real risks of currency, payment, and politics.^{cxxxiii} Some of it does not: the G20's Africa Expert Panel put the cost of the mispricing of African risk at US\$45 to 60 billion a year across all of the continent's external borrowing^{cxxxiv}.

Figure 7. What it costs to borrow for a solar project, and what a government pays a development bank**Estimated cost of debt for a privately financed solar project**

Per cent per year, January 2023



Sources: Climate Policy Initiative (2023), Cost of Capital for Renewable Energy Investments in Developing Economies, Table 2 (CAPM-based estimates); Kenny (2026) for the IBRD rate.

The consequences are visible in the pattern of investment. Africa attracts about 3 per cent of global energy investment and about 2 per cent of clean energy investment, with a fifth of the world's population^{cxv}. Of an estimated US\$60 billions of clean energy investment on the continent in 2024, about US\$40 billion came from public sources^{cxvi}. Utility-scale solar projects listed as private in the World Bank's database turn out, on inspection, to have multilateral or bilateral support covering about 86 per cent of their cost. The IFC's Scaling Solar programme, which produced a record tariff of 6 US cents per kilowatt-hour in Zambia in 2016, took more than US\$3.50 of public international finance to bring in each dollar of private money and delivered well under a quarter of its 1 GW target before going quiet^{cxvii}. The distributed boom needs none of this, which is why it is growing; the utility-scale segment needs all of it, which is why it is not.

Charles Kenny's conclusion, in a paper published in September 2026, is that governments and donors should stop financing utility-scale generation project by project through private deals that each require a subsidy and instead use the multilateral development banks to lend wholesale, at their own low cost of funds, for publicly owned generation^{cxviii}. A government can borrow from the World Bank for ten years in dollars at about 6 per cent; a private solar project in the same country borrows at 25.^{cxix, cxl} We think this argument is largely right for firm, grid-scale power and that it sits alongside rather than against the case for private distributed solar and for private African developers. Linda Mabhena-Olagunju, one of the few African developers with operating utility-scale assets, adds the piece that cheaper capital alone does not fix: there is often no bankable project to finance, because project preparation, permitting, grid studies, and power-purchase negotiation are a state-capacity problem before they are a capital-markets one, and local developers cannot carry the bid bonds and early-stage risk that decide who owns a project long before financial close^{cxli}. Table 3 sets out the instruments now on the table, with a candid view of their scale.

Table 3. Instruments for bringing down the cost of capital: what exists, how big it is, and what it can and cannot do

Instrument	Status in September 2026	What it does and its limits
Multilateral wholesale lending for public generation ^{cxlii}	Proposed. The World Bank's two lending arms (IBRD and IDA) charge 5 to 6 per cent in dollars, or less; Mission 300, the World Bank and AfDB programme to connect 300 million people by 2030, already channels about US\$15 billion, mostly to access and distribution.	The largest lever for firm, grid-scale power. Requires utilities that can repay, so it depends on tariff and governance reform, and on donors accepting a public rather than private model of generation.
Guarantees	The World Bank Group's guarantee platform issued more than US\$25 billion in FY2026, beating its 2030 target four years early, and will double guarantees for Africa to US\$6.4 billion a year. ATIDI's liquidity facility has covered about ten projects. The African Guarantee Fund launched a US\$5 billion local-currency facility under Mission 300.	The fastest-growing instrument. Lowers the risk premium on individual projects but shifts rather than removes sovereign risk and remains project by project.
Local-currency finance	TCX, a currency-hedging fund backed by development banks, has hedged more than US\$4 billion in 31 African countries; Kenya's infrastructure bonds raised a record KSh 312 billion in August 2026 at 12 to 13 per cent, comparable after expected depreciation to its 8 to 9 per cent Eurobonds; InfraCredit, a Nigerian guaranteed company, has mobilised pension money into naira-denominated infrastructure debt.	Removes the currency mismatch that adds 5 to 6 points to the cost of capital. Depends on domestic bond markets and on guarantee wraps that let pension funds hold the paper. No continental FX facility yet exists.
Domestic institutional capital	African pension assets are roughly US\$450 billion, concentrated in South Africa, Nigeria, Kenya, Namibia and Botswana; outside South Africa about 1 per cent is in infrastructure. South Africa's Public Investment Corporation, the state asset manager, holds more than 2 GW of renewables.	The only pool of long-term local-currency money large enough to matter. Needs rated local paper, regulatory limits reform and project pipelines; slow, but compounding.
Project preparation and early-stage equity for African developers	The Alliance for Green Infrastructure in Africa's project development fund reached a first close of US\$118 million in August 2025 against a US\$400 million target; Africa50, the AfDB-sponsored infrastructure investor, manages about US\$1.4 billion. Dedicated project-preparation capital across Africa's development finance institutions is about US\$1 billion accumulated over a decade.	Addresses the ownership gap directly and cheaply. Too small today; DFI grants take 12 to 18 months to disburse against tender timelines. A bid-bond and development-equity window is the missing product.

Instrument	Status in September 2026	What it does and its limits
Debt-for-energy swaps	Zambia bought back US\$1.36 billions of 2053 Eurobonds in June 2026 with an AfDB loan, ring-fencing US\$275 million of savings for the grid; Côte d'Ivoire (2024) and Gabon (2023) did similar for education and oceans.	Replaces 8 to 10 per cent commercial debt with development-bank debt and directs the saving; bespoke and modest against US\$89 billion a year of debt service, but the logic is the wholesale logic.
Hybrid capital and SDR channelling	The AfDB raised US\$1.25 billions of hybrid capital in 2024-25, each dollar leveraged three to four times. The IMF approved the channelling of Special Drawing Rights, its reserve asset, to development banks in May 2024; no country has yet subscribed.	Expands the balance sheets that can lend wholesale. Market hybrids work; the SDR route needs five sponsor countries and has none.
Working capital and warranty cover for manufacturers	Africa's trade-finance gap is US\$74 to 92 billion a year ^{cxliii} . Afreximbank's insurance arm supports US\$15 billion of assets. No warranty backstop for African modules exists.	The specific gap for production rather than deployment: cells must be prepaid, and a new plant cannot buy warranty insurance. A revolving input line and a first-loss layer behind a commercial carrier are cheap relative to a factory subsidy.
Credit ratings and debt architecture	The African Credit Rating Agency launches on 7 October 2026 in Mauritius, focused initially on local-currency instruments. The G20 Africa Expert Panel proposed a debt refinancing initiative and a borrowers' club; the G20's cost-of-capital commission has not been constituted. ^{cxliv}	Slow and indirect, but the mispricing problem is systemic and will not be solved project by project.

Sources: World Bank ^{cxlv,cxlvii}; AfDB ^{cxlvii,cxlviii}; ATIDI ^{cxlix}; Energy for Growth Hub ^{cl}; Kenny ^{cli}; Mabhena-Olagunju ^{clii}; Africa Expert Panel ^{cliii}; press reports as cited in the reference list.

Three conclusions follow for finance ministers. The first is that the cost of capital is a policy variable. Every instrument in Table 3 exists because someone decided that a government or a development bank should stand behind a risk that the market priced at 25 per cent. The second is that the instruments that reach scale soonest are the ones that use existing balance sheets: multilateral lending, guarantees and domestic pension money, all of which grow faster when there are bankable projects and creditworthy utilities to absorb them. The third is that manufacturing has its own, narrower financing problem, working capital for prepaid inputs and a warranty that lenders will accept, and that solving it costs a small fraction of what a tariff or a tax holiday cost. A ministry that funds the input line and the first-loss layer, and declines the tariff, will have done more for African production than one that does the reverse.

10 What policymakers should do now

Significant tariffs or large capital outlays are not essential. Shifting African countries to becoming producers requires a change in posture: measure the market before subsidising it, fix what is already broken, and never grant support without conditions.

For governments, five decisions are critical:

- 01 Name the constraint before choosing the instrument.** An unavailable grid connection, an unfinanceable customer, a missing testing facility, a stalled procurement round and an uncompetitive factory call for different responses. A general solar subsidy addresses none of them efficiently.
- 02 Give domestic firms a workable route into the market.** Supplier qualification, testing infrastructure, apprenticeships linked to contracts, working-capital facilities, bonding guarantees, and procurement packages that competent local firms can deliver. Every support programme states the capability it is meant to build.
- 03 Judge manufacturing support by its effect on electricity users.** Count the cost to the 17 GW being installed alongside the benefit to the 200 MW being made. Where the home market is below the 1 GW threshold, protection fails this test and the answer is regional.
- 04 Budget the full public exposure.** Grants, tax expenditures, subsidised land and power, expected guarantee losses and infrastructure on one side; domestic value added rather than turnover, sustained employment rather than construction job-years, and net foreign-exchange savings rather than gross import substitution on the other.
- 05 Make continued support depend on evidence.** Productivity, quality, utilisation, supplier development and competitiveness, published. Write the review date and the renewal test into the law, and the clawback with them.

For energy and trade ministries, the first acts are the same everywhere: register distributed solar systems, publish the equipment the state and its utilities will buy over the next five years, and confirm with the AfCFTA Secretariat what the rules of origin currently say about solar goods. Each can be done within a year, and none costs more than staff time.

For the continental institutions, the asks are specific. The AfCFTA Secretariat to fix the product-specific rule for solar goods, with a date, and to bring solar into the Guided Trade Initiative. Afreximbank and the Trade and Development Bank to establish the input-finance and letter-of-credit facility and, with ATIDI and a commercial reinsurer, the first-loss layer behind warranty cover. The AfDB to fund the observatory, the testing capacity and the tropical-grade standard, and to put Mission 300's procurement on a published schedule that manufacturers can see. The governments of Egypt, Ethiopia, Morocco, South Africa and Tanzania to agree, before the US tariffs change in December, how the plants they host will be converted and how their demand will be shared.

The calendar is short. The US tariffs and minimum import prices on cells and modules take effect on 4 December 2026 and the Ethiopian circumvention ruling is due the same month. The African Credit Rating Agency opens on 7 October. AGOA now runs to the end of 2028. The rules of origin adopted in February 2026 are being implemented now. And the Heads of State meet in Addis Ababa early in 2027, which is where a first group of governments could commit to the compact.

There is a reasonable version of pessimism about all this. It says that Africa has been offered solar factories before, that the plants now running are somebody else's tariff strategy, and that the money to build an industry is not there. Each of those points is true, and none of them is decisive. The continent

is installing more solar every year than it did in its entire history before 2020, at prices that keep falling, in a market that will be the largest source of new electricity demand in the world for the rest of this century. The work around the panel is already African and could be more so at little cost. The finance to build the grid-scale system exists on the balance sheets of institutions whose purpose is to lend it, at rates that governments already pay. Sunshine, demand and capital are all present. What has been missing is the decision to organise them: to measure the market, to fix the trade rules, to pool what no single country can supply, and to ask, every time support is offered, what the public gets in return. Those are decisions that finance ministers can take, and this year is a good time to take them.

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